

Universitat de les Illes Balears

**CATÀLEG DE PROJECTES
D'INVESTIGACIÓ
DE LA UNIVERSITAT
DE LES ILLES BALEARS**

1999

Palma, 2000

© de l'edició: Universitat de les Illes Balears, 2000

© del text: Universitat de les Illes Balears, 2000

Rector: Llorenç Huguet

Vicerector d'Investigació: Eugeni Garcia

Edició: Oficina de Gestió de la Recerca. Servei de Publicacions i Intercanvi Científic.

Universitat de les Illes Balears. Campus universitari.

Cra. de Valldemossa, km 7.5. 07071 Palma (Illes Balears)

Coberta: Jaume Falconer

DL: PM 827-2000

ÍNDIX

1. Projectes de recerca en el marc de la Unió Europea, i altres accions	7
2. Projectes de recerca finançats pel Govern espanyol i la Comunitat Autònoma de les Illes Balears	45
— Departament de Biologia	47
— Departament de Biologia Fonamental i Ciències de la Salut	65
— Departament de Ciències de l'Educació	73
— Departament de Ciències Històriques i Teoria de les Arts	81
— Departament de Ciències Matemàtiques i Informàtica	95
— Departament de Ciències de la Terra	111
— Departament de Dret Privat	119
— Departament de Dret Públic	125
— Departament d'Economia i Empresa	129
— Departament de Filologia Espanyola, Moderna i Llatina	137
— Departament de Filosofia	143
— Departament de Física	147
— Departament d'Infermeria (en constitució)	163
— Departament de Psicologia	169
— Departament de Química	177
— Institut Mediterrani d'Estudis Avançats (IMEDEA)	195
Projectes d'Estímul a la Transferència de Resultats d'Investigació (PETRI)	213
Projectes d'Infraestructura	217
Accions Integrades	221
Accions Especials	225
3. Projectes de recerca aplicada i desenvolupament	229
4. Índex d'investigadors	241
5. Índex d'abreviacions	255

PROJECTES DE RECERCA EN EL MARC DE LA UNIÓ EUROPEA, I ALTRES ACCIONS

- **Operation of an Innovation Relay Centre in Murcia, Valencia and Balears.** GARCIA MORENO, Eugeni
- **ARIADNE. Academic Experience at Balearic Islands (AACEBI).** SERRA CIFRE, Bartomeu Jaume
- **Setting-up a pilot inter-university centre at the level of Electrotechnics Department.** GARCIA MORENO, Eugeni
- **Observations and Modelling of Eddy Scale Geostrophic and Ageostrophic Circulation (OMEGA).** TINTORÉ SUBIRANA, Joaquim
- **Fluxes Across Narrow Shelves (FANS). The Ebro Delta case.** GOMIS BOSCH, Damià
- **Mediterranean Targeted Project II-Mass Transfer and Ecosystem Response (MTP-MATER).** TINTORÉ SUBIRANA, Joaquim
- **Development of non conventional shape memory alloys production technologies: high-temperature Cu-based and Ni-Ti-based alloys.** CESARI ALIBERCH, Eduard
- **Quantum structures.** SAN MIGUEL RUIBAL, Maximino
- **Euromod a European Tax-Benefits Microsimulation Model.** SPADARO, Amedeo
- **Des Minimas sociaux sous la forme de prestations degressives: evaluation d'une reforme.** SPADARO, Amedeo
- **The Influence of native flora on the characteristics of cheeses with "Appellation d'Origine Protegee (AOP)" made from raw milk.** ROSSELLÓ MATAS, Carme
- **Hierarchical Performance Evaluation of Large Information Open Systems (HELIOS).** PUIGJANER TREPAT, Ramon
- **Successful User Centred Systems Engineering Development and Environment (SUCSEDE).** PUIGJANER TREPAT, Ramon
- **Viscosity solutions and their applications.** CASELLES COSTA, Vicent
- **Multi-site cooperative 3D design system for architecture (M3D).** LUO, Yuhua
- **Helth Telematics Training Network (HEALTHNET).** PALOU OLIVER, Andreu; ROCA SALOM, M. del Pilar; OLIVER OLIVER, Jordi
- **Optimizaçao da produçao e propagaçao da alfarrobeira.** LOPES ROMANO, Anabela M. MEDRANO GIL, Hipólito (associat)
- **Time resolved study of chlorophyll fluorescence changes induced by water-waste.** MEDRANO GIL, Hipólito
- **Electronic Commerce Legal Issues Platform (E-CLIP).** CAVANILLAS MÚGICA, Santiago
- **Design and evaluation of residential patterns in the Mediterranean region appropriate to sustainable development of environmentally deteriorated rural areas (ARTEMIS).** PETRUS BEY, Joana Maria

- European Shore Platform Erosion Dynamics (ESPED).** FORNÓS ASTÓ, Joan Josep
- Safety regulation of transgenic crops: completing the internal market? (ELSA).** LUJÁN LÓPEZ, José Luís
- Otholit microchemistry as a means of identifying stocks of deep-water demersal fish (OTOMIC).** MORALES NIN, Beatriz
- European Fish-Network (EFAN).** MORALES NIN, Beatriz
- Impact fishery and environment on hake recruitment in Northwester Mediterranean (LLUCET).** MORALES NIN, Beatriz
- Environment and biology of deep-water species *Aphanopus carbo* in NE Atlantic: basis for its management (BAS BLACK).** MORALES NIN, Beatriz
- Effects of entrophicated seawater on rocky shore ecosystems studied in large littoral mesocosm (EULIT).** DUARTE QUESADA, Carlos
- Prediction of the resilience and recovery of distributed coastal communities in the tropics (PREDICT).** DUARTE QUESADA, Carlos
- Microlasers and cavity QED.** SAN MIGUEL RUIBAL, Maximino
- Developing deepwater fisheries: data for their assessment and for understanding their interaction with an impact on a fragile environment.** MORALES NIN, Beatriz
- Patterns in active nonlinear optical systems.** BALLE MONJO, Salvador
- Efectos del ruido en sistemas lejos del equilibrio.** SAN MIGUEL RUIBAL, Maximino
- Study on obesity and functional foods in Europe.** PALOU OLIVER, Andreu
- Body weight and energy expenditure. Functional food and nutrition technology.** PALOU OLIVER, Andreu
- Wavelength scale photonic components for telecommunications.** SAN MIGUEL RUIBAL, Maximino
- Semiconductor devices for signal processing.** BALLE MONJO, Salvador
- Aplicaciones del principio de máxima entropía al estudio de sistemas ligados por interacción electromagnética y/o fuerte en el espacio de coordenadas y en el espacio de momentos.** CASAS AMETLLER, Montserrat; PLASTINO, Ángel

Projecte núm.: NRC3. 41 (CENEMES 2nd. Phase).

Títol: Operation of an Innovation Relay Centre in Murcia, Valencia and Balears.

Centre: Servei I+D (OTRI). Edifici Mateu Orfila i Rotger.

Investigador principal: GARCIA MORENO, Eugeni.

Categoria: CU (àrea de coneixement: Tecnologia Electrònica).

Socis:

Instituto de Fomento de la Región de Murcia (INFO)
Asociación de Investigación de la Industria Agroalimentaria (AINIA)
Coordinador: Universitat d'Alacant

Summary

Directorate General XII of the European Union finances the Spanish Mediterranean Relay Centre (CENEMES) in which R+D Service (OTRI) of the University of the Balearic Islands takes part together with the University of Alacant (coordinator), the Promotion Institute of Murcia (INFO) and Medium and Small Industry Institute of Valencia (IMPIVA), so the area that this centre extends have in common particular socio-economic characteristics and problems. Furthermore, CENEMES is one of the 52 relay centres already established all around Europe that have the following objectives:

—Innovation promotion in the local industry, specially by exploiting the research results and transferring of technology.

—Participation promotion in European Union R+D Programmes and the diffusion and application of their results.

—Information spreading on transfer, results exploitation and participation in research projects.

—Partners searching for national and european projects.

—Scientific and technological offer and demand diffusion.

The activities of this centre do not concentrate inside the University of the Balearic Islands, but its aim is mainly to increase the participation of Balearic enterprises in research and technological development projects and the results transfer from projects carried out in our University to the productive system, both in our geographical area and all around Europe.

Projecte núm.: ET 4001(ET).

Títol: ARIADNE. Academic Experience at Balearic Islands (AACEBI).

Centre: Servei de Càlcul i Informatització. Edifici Anselm Turmeda.

Investigador principal: SERRA CIFRE, Bartomeu Jaume.

Categoria: CU (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Socis europeus:

Department Computerwetenschappen. Katholieke Universiteit Leuven (Bèlgica)
 Dipartimento di Ingegneria Biofisica e Elettronica. Univesità degli Studi di Genova (Itàlia)
 Faculté des Sciences Agronomiques. Université Catholique de Louvain (Bèlgica)
 Institut d'Informatique et d'Organisation HEC. Université de Lausanne (Suïssa)
 Insitut de Recherche en Informatique et Télécommunication.
 Université Paul Sabatier (França)
Coordinador: Laboratoire d'Enseignement Assisté par Ordinateur. Ecole Polytechnique
 Fédérale de Lausanne (Suïssa)

Summary:

Due to the geographical environment of the University of the Balearic Islands (UIB) -it covers several islands- we are a good testbed for demonstration experiments like those of ARIADNE Extension proposal. The UIB has its head office at Mallorca, major island of the Balearic Islands. The following table shows the implementation plan of studies in Menorca and Eivissa and estimated number of people attending them in Menorca and Eivissa:

	<u>Menorca</u>	<u>Eivissa</u>	<u>Number of students</u>
1st year	Teacher: infant education (I)	Teacher: infant education (I)	120
2nd year	Teacher: infant education (I, II)	Teacher: infant education (I, II)	240
	Business administration	Business administration	120
3rd year	Teacher: infant education (I, II, III)	Teacher: infant education (I, II, III)	360
	Business administration (I, II)	Business administration (I, II)	240
	Telematics (I)	Telematics (I)	120

In this scenario we will mix traditional classes and methodologies with distance learning classes and new methodologies based on telematics services (videoconferencing, telematic information, computer based systems, electronic mail communication, etc). In this way we will be providing an easier access to education to students of the other islands that have socio-geographic and economical disadvantages. We will use the tools developed for ARIADNE project in order to produce the pedagogical material, offered as on-line material and to process and evaluate the response of the academic community (teachers and students) to this innovative approach.

Projecte núm.: S-JEP-8001-94. Programa europeu estructural JEP TEMPUS.

Títol: [Setting-up a pilot inter-university centre at the level of Electrotechnics Department.](#)

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: [GARCIA MORENO, Eugeni.](#)

Categoria: CU (àrea de coneixement: Tecnologia Electrònica).

Socis europeus:

Catholic University of Leuven (Bèlgica)

University of Southampton (Regne Unit)

University of Gent (Bèlgica)

Technische Universität Chemnitz (Alemanya)

University of Naples (Itàlia)

Technical University of Salonic (Grècia)

Coordinador: Universitatea Technica diu Cluj-Napoca (Romania)

Summary

Keywords: electromagnetic fields.

- Curriculum development in teaching areas of Electromagnetic Field Theory, Computational Models and Methods in Analysis and Synthesis of Electromagnetic Fields.
- Organization of a Post Graduate Training Center of CAD/CAE in Electrical Engineering.
- Mobility of romanian students and professors to EC countries and also mobility of foreigner professors coming to Romania to deliver intensive courses.

Projecte núm.: MAS3-CT95-0001. Programa europeu de ciències i tecnologies marines.

Títol: Observations and Modelling of Eddy Scale Geostrophic and Ageostrophic Circulation (OMEGA).

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: TINTORÉ SUBIRANA, Joaquim.

Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Socis europeus:

The Southampton Oceanography Centre. The George Deacon Division for Ocean

Processes. Natural Environment Research Council (Regne Unit)

Institut de Ciències del Mar de Barcelona. CSIC (Espanya)

Dipartimento di Ingegneria dell'Informazione. Università degli Studi di Pisa (Itàlia)

Geohydrodynamics and Environment Research Laboratory. Université de Liège (Bèlgica)

Coordinador: Universitat de les Illes Balears

Summary

Keywords: interdisciplinary process oriented study, ageostrophic motion, mesoscale features, vertical velocity, bio-chemical influences, biological patchiness, acoustic and remote sensing techniques.

This proposal is for an *interdisciplinary process oriented study* of general scientific interest for Marine Sciences that could be carried out in any ocean area characterized by sharp density gradients and significant mesoscale variability. It is expected that the results obtained (among others, a method for routine computation of the vertical velocity) will be applicable to any ocean area. Therefore, although the experimental part of the proposal will take place in the region of the Alborán Sea and Almería-Orán front, this proposal has a wider scientific interest and should not be associated with one of the regional seas proposals. The choice of this specific ocean area has been made taking into account a number of factors that involve both the observational (in situ and satellite) and modelling parts of the project, discussed in section 4.3.

The importance of *three-dimensional ageostrophic motion* in mesoscale oceanic features (fronts, meanders, eddies and filaments) has been established in recent years in a number of areas of the world's oceans. The relevance of the ageostrophic motion comes from the fact that vertical velocities in mesoscale fronts and eddies have been found to be of the order of several tens of meters per day, this is an order of magnitude higher than the largest vertical velocities usually observed in upwelling areas. The major *objectives* of this proposal are to determine the spatial and temporal variability of the three-dimensional ageostrophic circulation in an intense mesoscale upper ocean front (upper 300 m), to understand the relationship between biological variability and mesoscale physics and to provide the scientific community with a new and useful tool for computation of vertical motions from routine CTD and ADCP data, using an interdisciplinary theoretical and experimental (in situ and remote) approach. Understanding and quantifying vertical velocities in front/eddy systems represents a continuation of our previous studies in these and other frontal areas (Tintoré et al. 1991; Pollard and Regier 1992; Allen et al. 1995), and has the ultimate aim of quantifying the net importance of ageostrophic circulations in the world's oceans.

Physical forcing at the mesoscale has clear biological implications such as enhancement of primary production. The transport of phytoplankton across the thermocline and the

phytoplankton growth in the euphotic zone have been studied by a number of authors, among others and initially by Woods et al. (1987). Recent studies using acoustic techniques have also demonstrated that biological patchiness of zooplankton may be closely coupled with hydrographic variability and that distributions that are seemingly inexplicable on behavioural grounds are related to vertical circulation in the upper ocean. The availability of new sensors for ocean observation (such as ERS-2 instrumentation and SeaWiFS on board the SeaStar satellite) will be very important for investigating to what extent these circulation patterns can be detected by remote sensing techniques.

Understanding the interactions between the physical, chemical and biological systems and their inherent variability is a necessary prerequisite for predicting the ways that the ocean responds to *environmental change*. Resolution and quantification of mesoscale spatial and temporal variability is central to the aims of this proposal, thereby avoiding errors in prediction due to oversimplification (e.g., Nival, 1990; Watson et al., 1991). The existence of significant vertical velocities has important implications on the exchanges, between the surface layer and the ocean interior, of properties such as heat, nutrients and CO². These exchanges control the ocean's ability to regulate the climate and the biological production. While it is well established that large scale circulation advects water through the seasonal thermocline, recent research, showing the existence of large velocities at ocean fronts, indicates that mesoscale processes are important in coupling physical and biogeochemical processes.

Projecte núm.: MAS3-CT95-0037. Programa europeu de ciències i tecnologies marines.
Títol: Fluxes Across Narrow Shelves (FANS). The Ebro Delta case.
Centre: Departament de Física. Edifici Mateu Orfila i Rotger.
Investigador principal: GOMIS BOSCH, Damià.
Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Socis europeus:

University of Wales (Regne Unit)
Institut de Ciències del Mar (Espanya)
Université de Toulon et du Var (França)
Proudman Oceanographic Laboratory (Regne Unit)
Universitetet Oslo (Noruega)
Centre d'Estudis Avançats de Blanes (Espanya)
Delft Hydraulics (Holanda)
Laboratoire Aragó (França)
Coordinador: Universitat Politècnica de Catalunya (Espanya)

Summary

Keywords: narrow shelf, fluxes, nearshore, slope, field data, remote sensing, modelling.

The general aim of FANS is to improve the knowledge on water fluxes and associated sediment and nutrient fluxes in narrow shelves, in which nearshore and continental shelf may interact to determine across-shelf dynamics. The main scientific aim of the project is to study the coupling between nearshore, shelf and slope processes. The project rationale envisages a synergetic use of observational/experimental remote sensing and numerical modelling techniques applied to a suitable test area.

Unlike on extense North Atlantic shelves, the flow dynamics on narrow shelves are strongly influenced -and sometimes determined by nearshore and slope processes. Narrow shelves may be regarded as regions limited by two "boundary layers" that merge and control processes across the continental shelf.

Many unsolved fundamental questions are linked to the narrow shelf concept. For instance, it is not known yet "how narrow" a narrow shelf has to be so that the shelf circulation is basically steered by nearshore and slope processes, nor "how wide" a narrow shelf has to be so that local forcings (winds, wind-waves, density gradients due continental outflows, etc.) are the dominant driving agents. The coupling between nearshore and slope dynamics across narrow shelves has not been much studied and may constitute a very interesting case to test theories and models developed for the nearshore, shelf and slope domains.

The Spanish Mediterranean coast is an extremely well suited environment where basic studies addressing the afore mentioned topics can be carried out.

The targeted area is envisaged as a test site for a generic research. The locally-obtained gain in understanding would be exportable to other narrow shelf environments and would also help to understand the role of nearshore and slope processes on wider shelf environments.

Projecte núm.: MAS3-CT96-0051.

Títol: [Mediterranean Targeted Project II-Mass Transfer and Ecosystem Response \(MTP-MATER\)](#).

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: [TINTORÉ SUBIRANA, Joaquim](#).

Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Socis europeus:

Departament de Biologia Marina. Institut de Ciències del Mar de Barcelona (Espanya)
Institut für Meereskunde an der Universität Kiel, ABT (Alemanya)

Departament de Geologia Marina i Oceanografia Física. Institut de Ciències del Mar de
Barcelona (Espanya)

Departament de Física. Grup de Física de les Radiacions. Universitat Autònoma de
Barcelona (Espanya)

Departament de Física Aplicada II. Universidad de Málaga (Espanya)

Laboratori d'Enginyeria Marítima. Universitat Politècnica de Catalunya (Espanya)

Norwegian College of Fishery Science. University of Tromsø (Noruega)

Coordinador: Departament de Geologia Dinàmica, Geofísica i Paleontologia. Universitat
de Barcelona (Espanya)

Summary

The objectives of the project are:

To study and quantify the triggering and controlling processes of mass and energy (water and its dissolved and particulate matter) transfer (transport and transformation) between the different compartments (land-sea, sea-atmosphere, water-sediment, living-non living, pelagos-benthos) and in contrasting environments (from eutrophic to oligotrophic, from shelf to basins).

To appraise the time and space scales of the phenomena, in identified structures of the Mediterranean system (basin and subbasin scale, mesoscale, local scale).

To investigate the ecosystem response to these transfers and its evolution with time (i.e. assesment of trends) as recorded in the water masses, in the biological communities and its sediments. The priorities of MATER are directly relevant to the major topics defined as objectives of the call for proposal of Regional Seas Research. due to the necessary effort that has to be undertaken to achieve a real multidisciplinary project, and also to the size of this project, we deliberately left aside the strictly coastal aspects of the Mediterranean and the evolution at a geological scale. We are aware of the fact that these specific points will be approached within the projects such as ELOISE or the overall MAST-III.

Projecte núm.: ERB IC15-CT96-0704. Programa europeu INCO de cooperació amb els països de l'est d'Europa i l'antiga Unió Soviètica.

Títol: [Development of non conventional shape memory alloys production technologies: high-temperature Cu-based and Ni-Ti-based alloys.](#)

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: [CESARI ALIBERCH, Eduard.](#)

Categoria: CU (àrea de coneixement: Física Aplicada).

Socis europeus:

Advanced Materials and Technologies (Bèlgica)

Laboratoire de Métallurgie Structurale. Ecole Nationale Supérieure de Chimie de Paris (França)

Institute of Metallurgy and Materials Sciences. Polish Academy of Sciences (Polònia)
Departement Metaalkunde-Toegepaste Materiaalkunde.

Katholieke Universiteit Leuven (Bèlgica)

Institute of Metal Physics. Ukrainian Academy of Sciences (Ucraïna)

Institute of Physics and Chemistry of Metals. University of Silesia (Polònia)

Coordinador: Universitat de les Illes Balears

Summary

The development of non-classical production and treatment technologies, such as *Melt-Spinning*, *Powder Metallurgy/Mechanical Alloying* and *Ultrasonic Deformation* applied to the *Shape Memory Alloys* is the subject of the proposed Research Project. These technologies are used in other fields of metallurgy but they have not been widely applied to produce shape memory microactuators, microswitches or implants into the human body. However, use of the non conventional techniques for the alloys' production can significantly influence their characteristics and thus intensive studies of this influence are here required. NiTi and Cu-based alloys constitute two groups of shape memory materials for which industrial and medical applications have been developed. They show some unusual functional behaviors such as the one -and two- way shape memory and superelasticity effects which are related to a structural transformation i.e. the reversible martensitic transformation.

The melt-spinning is one of the modern techniques for rapid solidification. It consists of the injection of an amount of melt alloy on a rotating wheel. Ribbons and wires are easily obtained using this procedure. Powder metallurgy and mechanical alloying use the material in form of powders (starting either with pure metallic components or already pre-alloyed powders) which is submitted to a mechanical processing. The extremely fine sized powders are subsequently compacted to any desired shape, like bending elements, for instance. In the case of less ductile Cu-based alloys this would eliminate many energy consuming intermediate stages of classical metallurgy such as hot rolling, drawing, extrusion etc. thus decreasing energy consumption and production costs, which has direct social and environmental benefits.

The ultrasonic deformation is a technique for treating solids using ultrasonic vibrations. The vibrations cause a mass-transfer effect and a plastic deformation. The technique is specially useful for surface treatments and form thin band production.

Projecte núm.: ERB FMRX-CT96-0077.

Títol: [Quantum structures.](#)

Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger.

Investigador principal: [SAN MIGUEL RUIBAL, Maximino.](#)

Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

Socis europeus:

Universität Innsbruck (Àustria)
Université Pierre et Marie Curie (França)
Ecole Normale Supérieure (França)
Istituto Nazionale per la Fisica della Materia (Itàlia)
Max-Planck-Institut für Quantenoptik (Alemanya)
Coordinador: University of Strathclyde (Regne Unit)

Summary

The development of increasingly sophisticated lasers, nonlinear optical materials, detectors and traps has made possible the observation of an impressive range of nonlinear and quantum optical effects. Among these are the self-organisation of the light produced by nonlinear optical systems, the production of intrinsically quantum states of light and the trapping and cooling of small numbers of atoms or ions. The principal objective of this network is to bring together expertise in nonlinear optical patterns, atom and ion trapping and cooling, and the quantum properties of light in order to carry out a comprehensive study of the quantum features associated with self-organising systems. To date, almost all of the work on such systems has been limited to the classical regime, but our experience with quantum effects leads us to believe that we can extend these studies into the fully quantum regime of operation. Indeed, the teams forming our proposed network are uniquely qualified to undertake this study. Such an extension is important and novel for two reasons: Firstly, this is a new regime of optical physics at the interface between nonlinear dynamics and quantum physics and it provides scope for new and rich behaviors such as those predicted in studies of quantum chaos. Secondly, as optical devices get smaller we can expect quantum effects become of increasing significance in their operation, with the most interesting behavior arising from the interplay between nonlinearity and quantum effects. Although there is a strong interdependence between the underlying tasks of these two research topics, it is natural to divide our programme into two main objectives:

- Quantum effects in optical patterns (quantum images). To carry out an experimental, computational and theoretical study of quantum properties associated with spatio-temporal patterns produced in optical parametric oscillators (OPO), intracavity second harmonic generation (ISHG) and Kerr media.
- Preparation and study of ordered arrays of ions and atoms. To carry out an experimental, computational and theoretical study of the quantum properties associated with ordered arrays of trapped atoms and ions.

Projecte: Training Socio-Economic Research Program.

Títol: [Euromod a European Tax-Benefits Microsimulation Model](#).

Centre: Departament d'Economia i Empresa. Edifici Mateu Orfila i Rotger.

Investigador principal: [SPADARO, Amedeo](#).

Categoria: TU int. (àrea de coneixement: Economia Aplicada).

Socis europeus:

Universidad de Cambridge (Anglaterra)

Nuffield College Oxford (Anglaterra)

Uninversitat de Bolònia (Itàlia)

Coordinador: DELTA (França)

Summary

The main objective of this research project is to build an integrated microsimulation model at European level allowing for the comparative analysis of actual redistributive mechanisms in many EC Countries.

Projecte: Commissionari General du Plan. Gabinet du Premier Ministre.

Títol: Des Minimas sociaux sous la forme de prestations degressives: evaluation d'une reforme.

Investigador principal: SPADARO, Amedeo

Socis europeus:

Université de Cergy (França)
Coordinador: Govern Francés (França)

Summary

The main objective of this research project is to analyze alternative proposals concerning the reform of redistribution schemes in France. We will explore more simpler structures such as Basic Income/Flat Tax and reforms of social security contributions. All the analysis will be carried out by using a tax-benefits microsimulation model.

Projecte núm.: AIR3-CT94-2039. COST 234/94. Programa europeu d'agricultura i agroindústria, inclosa la pesca.

Títol: [The Influence of native flora on the characteristics of cheeses with “Appellation d’Origine Protegee \(AOP\)” made from raw milk.](#)

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigadora principal: [ROSSELLÓ MATAS, Carme.](#)

Categoria: TU (àrea de coneixement: Enginyeria Química).

Socis europeus:

Consorzio Parmigiano Reggiano i Consorzio Produttori Fontina (Itàlia)
INRA SRTAL, CIGC, Syndicat Interprofessionel du Reblochon i
INRA Technologie Laitère (França)
University College (Irlanda)
CSIC Instituto del Frío, Universidad Pública de Navarra,
CRDO Idazábal i CRDO Maó (Espanya)
Aristotle University of Thessaloniki (Grècia)
Universität für Bodenkultur (Àustria)
INETI (Portugal)
SMR R+D Research Department (Suècia)
FAM (Suïssa)
Hannah Research Institute (Escòcia)

Summary

The general objective is to arrange an exchange between 21 participants and 10 countries on a technical and scientific basis to bring about practical and concrete results by collaborating. Firstly special attention will be given to define what is the role of native flora in determining the typical characteristics of traditional cheeses under a biochemical, rheological and sensorial point of view. Secondly, collaborate more closely in the productive and scientific fields in order to improve the quality and tackle the market. Lastly make the results available to the European regional and traditional dairy industry which will put them into practise.

Projecte núm.: Esprit Project 22354.

Títol: Hierarchical Performance Evaluation of Large Information Open Systems (HELIOS).

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: PUIGJANER TREPAT, Ramon.

Categoria: CU (àrea de coneixement: Arquitectura i Tecnologia de Computadors).

Socis europeus:

Ecole Polytechnique Fédérale de Lausanne (Suïssa)

EURIWARE (França)

IONA Technologies LTD (Irlanda)

The Mari Group Limited (Regne Unit)

TRANSTOOLS' (Espanya)

University of Southampton (Regne Unit)

Coordinador: IFATEC (França)

Summary

The objective is to allow enterprises to copewith the wave of second generation client/server applications by helping the user to visualise and understand the way his/her workload would be handled by new middeleware technologies. The next generation of client/server systems will inevitably be built using three-tiered architecture, where object oriented technology will be the ultimate form of self managing distribution.

The project will develop a workbench to predict and analyse performance and thereby aid the sizing and the configuring of commercial systems by service suppliers, service integrators, client/server editors and customers as well. This will provide:

- performance prediction of a particular configuration and workload
- the ability to analyse and display information in a way easy to understand and which highlights bottlenecks
- tuning assistance for an existing configuration for a particular workload.

Projecte núm.: Esprit Project 23242.

Títol: Successful User Centred Systems Engineering Development and Environment (SUCSEDE).

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: PUIGJANER TREPAT, Ramon.

Categoria: CU (àrea de coneixement: Arquitectura i Tecnologia de Computadors).

Socis europeus:

Quality Systems and Software Limited (Regne Unit)

Caixa de Balears "Sa Nostra" (Espanya)

University of Ulster (Regne Unit)

Coordinador: Matra Bae Dynamics Limited (Regne Unit)

Summary

There are many examples of failures in the development of both Management Information Systems (MIS) and Real Time and Embedded Systems (RTES) domains. These failures can almost always be traced to mis-management in the early phases. Therefore this project will concentrate on these phases to generate soundly based development processes in the transformation of user requirements into an architectural design. It is also recognised that there is still significant immaturity in the way in which software intensive computer based systems are developed. This indicates that there are serious gaps in processes and methods which are in general use. The methods used offer only single point solutions; the tools tend to be stand-alone with no facility for integration. The situation is not improved by the lack of any proven, universally accepted, foundation for the engineering of software-based systems. What is required is sound architectural foundation capable of providing a meaningful understanding of crucial aspects such as: system behaviour, resource utilisation, performance, reliability, maintainability and reconfigurability. Developers tend not to adopt component based construction (composition) strategies and thus cannot exploit re-use during design, implementation and evolution in service. The need for V&V during the early stages is not generally recognised, and its absence contributes to many problems in development projects. The issue of risk is an all pervading aspect of systems engineering which is not given full consideration during the formative early stages. The increasing number of computer base systems indicates that it is necessary to improve the process so that better quality systems can be developed and also that these better quality systems must be developed significantly more quickly than is currently the norm.

Projecte núm.: FMRX-CT98-0234.

Títol: [Viscosity solutions and their applications.](#)

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: [CASELLES COSTA, Vicent.](#)

Categoria: TU (àrea de coneixement: Matemàtica Aplicada).

Socis europeus:

Université de Tours (França)

Rheinische Friedrich-Wilhelms-Universität (Alemanya)

Foundation for Research and Technology-Hellas (Grècia)

Universita degli studi di Milano (Itàlia)

Universita degli studi di Padova (Itàlia)

Universita degli studi di Roma-La Sapienza (Itàlia)

Universidad de Las Palmas de Gran Canaria (Espanya)

Kungl Tekniska Högskolan (Suècia)

Coordinador: Centre de Recherches de Mathematiques de la Décision.

Université de Paris IX-Dauphine

Summary

This is a proposal for research on problems related to the theory of viscosity solutions and its applications. The theory of viscosity solutions is one of the most central and fastest growing areas in the field of nonlinear partial differential equations. Its scope extends from rather deep and challenging mathematical problems to the modelling and analysis of a large number of applied problems in science, engineering, atmospheric/ocean studies and economics, which include, among others, phase transitions, moving fronts, statistical mechanics, combustion, turbulent reaction-diffusions, optimal and stochastic control, mathematical finance, image processing, etc...The understanding of such applications obviously requires, in addition to theoretical results, extensive computations and efficient numerical methods, which can be derived and analysed using the theory of viscosity solutions.

The long list of applied areas and problems which can be studied using methods related to viscosity solutions, the rather difficult and challenging mathematical problems that encompasses as well as the astonishing progress already achieved, in such a relatively short (for mathematics) period, using viscosity solutions has generated an ever growing interest in Europe, US, Japan and China. An indication of the growing importance of this theory for mathematics is that, since 1981 when M. G. Crandall and P.-L. Lions introduced the concept of the viscosity solution, more than one thousand papers related to the subject have been published in mathematical journals of high quality, a rather amazing fact for mathematics. A proof of the importance and relevance of viscosity solutions for applied mathematics is the fact that they have already been used successfully to analyse a large number of questions related to the applications mentioned above. Europe is in a unique position to be at the forefront of this theory. Some of the leading groups in the world in the theory of viscosity solutions and its applications are located in Europe and all of them are participating in this project. Bringing them together increases the talent, the ability and the expertise needed to address the new problems. The resulting interaction among groups working in some aspects of the applications will definitely increase the understanding and provide the necessary input and ability to address the even more challenging problems lying ahead of us. Besides its mathematical importance, further progress in the theory of

viscosity solutions and its applications will lead to better, and, in some occasions, important, understanding in sciences like physics, chemistry, in atmospheric-ocean studies and medicine through progress in, for example, material sciences, image processing, front propagation, microphysics of clouds, in engineering and technology in general, through progress in combustion, material sciences (crystal growth, phase transitions) and image processing, and in socio-economic issues, like mathematical finance, environmental economics, the study of the environment, etc. Finally carrying out research in the theory of viscosity solutions and the activities surrounding this research will result in educating a whole new generation of young researchers, the so-called New Applied Mathematicians, who will be able to do modelling, theoretical work at the highest possible level of Mathematics and numerical computations, and will be involved in real problems.

Projecte núm.: Esprit Project 26287.

Títol: Multi-site cooperative 3D design system for architecture (M3D).

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigadora principal: LUO, Yuhua.

Categoria: AS. ESTR. (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Socis europeus:

Associação para o Desenvolvimento das Telecomunicações e
Técnicas de Informática (Portugal)
Grupo ARMAQ I+D (Espanya)
European Design Centre BV (Holanda)
IDOM Ingeniería y Sistemas SA (Espanya)
Oficina de Arquitectura, Urbanismo, Construção e Imagens, LDA (Portugal)
Superscape LTD (Regne Unit)
Coordinador: Universitat de les Illes Balears

Summary

Keywords: high performance computing and networking, networked architecture design, 3D CAD, cooperative work, virtual studio, multimedia interactive communication service.

The objective of the project is to integrate the CAD technology with the VR and high performance network technology to be a prototype multi-site cooperative 3D system for architecture design. The foreseen prototype system will extend the major functions of the single user CAD architecture design tools to a networked cooperative system at multiple locations. Real time interactive cooperative design with audio/video conferencing will be realized in the systems with other off-line functions. The current target geographic area to cover is at the European scale. It can be extended in the future. For cooperative architecture design, real time cooperative design working sessions linking long distance users will be available. The project will develop all the necessary multi-site cooperative editing tool, real time distributed visualisation tool and network communication tool for this purpose. As an important element, a shared databasa containing all the architecture designs information, not only geometry, but other related information will be developed for the system. The multi-site users will be able to imput their own 3D designed components together into the system to form a global desgin, visualize them, modify the attributes of the component and the whole environment. Modifications of the design will be sent back to the related users. High volume, high speed network connection will be established for data transmission including image data, digitized audio/video signal, text, graphic primitives, control signal, etc. Euro-ISDN network will be considered first for the system, due to the wide availability and flexibility of changing the bandwidth according to the workload. It will be linked to the local ETHERNET or ATM networks. An interactive approach will be taken for the development of the project. The rich experience of the user partners in the construction industry will be most valuable for the project since the system will be most valuable for the project since the system will be developed for their use. The user partners in the project will be actively involved in the project definition phase, project development phase and the integration phase. In general, M3D system development will be user-oriented instead of technology-push. The user partners will play a major role in the definition of the project. The users will also make simple trial in the prototype system.

They will test critical elements during the development phase such as the multi-site editor, distributed visualiser, the network connection, etc. The iterative approach will be even emphasized in the third project year. The test results of the user to all the elements will be taken into account for the integration of the alpha, and beta version of the system (user feedback integration). They will have a full trial test using real like architecture project during the third project year. The foreseen prototype system will supply the necessary turnkey technology for a significant change of the traditional architecture design process in Europe. The project will demonstrate how the cooperative networked integrated system of architecture can provide much higher accuracy, efficiency, and flexibility in the architecture design process. It will also show the potential of the new market in Europe for architects in each country to work in international consortiums within architectural projects. The result of the project will facilitate the application of the HCPN in this high potential, cata extensive industry sector. It will contribute to strengthen the competitiveness of the european architecture design sector. The consortium will pay special effort for the exploitation of the project result. To make the industry aware of the new system and collect the feedback from the industry during the project time, dissemination activities such as workshops and demonstrations will be organized. The organization work for exploitation of the project result will be implemented at two different levels: within the consortium and outside the consortium. A product will be defined from the project and commercialization of the product will be strongly welcome.

Projecte núm.: CY/97/2/00988/PI/II.1.1.c/CONT.

Títol: Helth Telematics Training Network (HEALTHNET).

Centre: Departament de Biologia Fonamental i Ciències de la Salut. Edifici Guillem Colom Casanovas.

Participants de la UIB: PALOU OLIVER, Andreu; ROCA SALOM, M. del Pilar; OLIVER OLIVER, Jordi.

Socis europeus:

Ministeri de Cultura (Xipre)
Institut Xipriota de Neurologia i Genètica (Xipre)
Associació Mèdica Panxipriota (Xipre)
Govern Balear (Espanya)
Institut de Medicina i Fisiologia Especials (França)
Institut de Ciències de la Computació. Fundació per a la Investigació i Tecnologia ia
(Grècia)
Coordinador: Universitat de Xipre (Xipre)

Summary

The specific objectives of the pilot are summarised as follows:

1. The identification of training needs for the promotion of health telematics technological research, development programme and there application.
2. The development of a health telematics network for training and the transfer of new technology.
3. The development of a new multimedia based training methodology for health telematics.
4. The development of a health telematics educational package organised in modules concerning specific skills which are necessary for teleworking in the health sector.
5. The training of trainer and pilot application involved will lead to the better use of new applications and advance the effectiveness of teleworking in the health sector.

Projecte núm.: INTERREG II, contracte núm. 20/REGII/6/96.

Títol: [Optimização da produção e propagação da alfarrobeira.](#)

Centre: Departament de Biologia-IMEDEA. Edifici Guillem Colom Casasnovas.

Investigadora principal: [LOPES ROMANO, Anabela M.](#) Universidade do Algarve (Portugal).

Investigador associat: [MEDRANO GIL, Hipólito.](#)

Categoria: CU (àrea de coneixement: Biologia Vegetal).

Socis europeus:

Fundação da Faculdade de Ciências da Universidade de Lisboa (Portugal)

CIA General del Algarrobo de España, S.A. (Espanya)

Coordinador: Universidade do Algarve (Portugal)

Summary

Carob is an important crop for mediterranean countries, usually founded in marginal soils. Market expectatives for pod and mainly seeds is very promising. Therefore different efforts should be devoted to improve the basic and applied knowledge on this crops.

The different groups of this Project are aimed to develop basic research on mineral nutrition physiology of the tree, propagation techniques, by cuttings or "in vitro" culture, and other basic aspects of the field behaviour of this crop. Applied research will be also done in these groups as well as in the new orchards of carob trees located in Andalusia propriety of the company also included in the Project.

Projecte núm.: BF 026-98.

Títol: Time resolved study of chlorophyll fluorescence changes induced by water-waste.

Centre: Departament de Biologia. Edifici Guillem Colom Casasnovas.

Investigador principal: MEDRANO GIL, Hipólito.

Categoria: CU (àrea de coneixement: Biologia Vegetal).

Socis europeus:

Coordinador: LURE, CNRS. Universitè de Paris-Sud

Summary

The interest of chlorophyll fluorescence as a putative signal for detection and accurate analyses of physiological phenomena associated with water stress, the most limiting factor for crops yield over the world, led us to apply for the series of projects developed at LURE since 1996 (see Experimental Report).

The results of previous projects revealed that several signals related with chlorophyll fluorescence (particularly the steady-state signal, F_s), can be excellent tools for early detection of water stress (Cerovic et al., 1996; Flexas et al., 1998a, b, c; Flexas et al., 1999). Also, evidences for a qE -related process involved in the down-regulation of F_s as a response to water stress have been obtained through time-resolved measurements using the Super-ACO equipment and from photochemical reflectance index (see Experimental Report).

Now, apart of the possibility of repeating some of the previous experiments due to technical problems during the previous measurements (see Experimental Report), we are interested into extend our study to fluorescence signals different to that of chlorophyll. It has been recently reviewed the special index of blue-green fluorescence and of red(chlorophyll) to blue fluorescence ratios for plant stress assessment (Lichtenthaler, 1996; Cerovic et al., 1999). Blue-green fluorescent molecules in leaf epidermis are mainly phenolic and other compounds related with plant secondary metabolism, which increase their content as a response to environmental stressed, like water stress (Cerovic et al., 1999). Of particular interest for stress assessment is the shift from a dominant chlorophyll fluorescence and low blue-green fluorescence under control conditions. Grapevines have important amounts of phenolic compounds in leaves and, specially, in fruits, to which they confer most of the characteristics related with fruit quality. It is now that water stress strongly affects to the characteristics of phenolic metabolism, at least in fruits (Escalona et al., 1999 and unpublished). Thus, blue-green fluorescence studies seem to be also a promising tool for water stress detection in grapevines. The multiwavelength capability of synchrotron radiation makes it a good instrument for this kind of analyses (Cerovic et al., 1994).

The aim of the present project is to obtain a first collection of data of combined measurements of chlorophyll fluorescence and blue-green fluorescence throughout a period of continuous water stress development in plants of grapevine. These first results may indicate if the study of blue-green fluorescence is or not a good, new way, for stress monitoring in grapevine crops. The proposed experiment is:

1. Cultivation of grapevine plants at the greenhouse of Orsay University, under conditions of high light and temperature, as already done in previous experiments (Flexas et al., 1998a).

2. During the development of water stress in these plants, continuous monitoring of chlorophyll fluorescence and gas exchange ratios under greenhouse conditions, to get good estimations of F_s variations with water stress (Flexas et al., 1998a).

3. Also, leaf samples will be taken daily along the time of water stress development.

These samples will be kept in cold several days until they were analysed using the synchrotron radiation. Excitation spectra of red and blue-green fluorescence will be determined.

Projecte núm.: Esprit Project 27028.

Títol: [Electronic Commerce Legal Issues Platform \(E-CLIP\)](#).

Centre: Departament de Dret Privat. Edifici Anselm Turmeda.

Investigador principal: [CAVANILLAS MÚGICA, Santiago](#).

Categoria: CU (àrea de coneixement: Dret Civil)

Socis europeus:

Bureau Van Dijk Management Consultants (Bèlgica)

Facultes Universitaires Notre Dame de La Paix (Bèlgica)

GMD-Forschungszentrum Informationstechnik GMBH (Alemanya)

Queen Mary & Westfield College (Regne Unit)

University of Oslo (Noruega)

Coordinador: Westfaelische Wilhelms-Universitaet Muenster (Alemanya)

Summary

The E-CLIP (Electronic Commerce Legal Issues Platform) proposal seeks to set up a platform on the legal issues of electronic commerce with the objective of providing legal support to so-called vertical projects on any issue of law linked to electronic commerce, thereby stimulating expertise and increasing general awareness of the existing or recommended legal framework of electronic commerce. Five research centre highly specialised in information and technology law carry out the assessment work and ensure legal assistance to these RTD projects assisted. An important task consisting of enhancing awareness of the legal aspects of electronic commerce will also be carried out, namely via publications, organisation of workshops, organisation of an international conference and Web Site.

Projecte núm.: ENV4-CT97-0656.

Títol: [Design and evaluation of residential patterns in the Mediterranean region appropriate to sustainable development of environmentally deteriorated rural areas \(ARTEMIS\).](#)

Centre: Departament de Ciències de la Terra. Edifici Guillem Colom Casasnovas.

Investigadora principal: [PETRUS BEY, Joana Maria.](#)

Categoria: TU (àrea de coneixement: Anàlisi Geogràfica Regional).

Socis europeus:

Conseil d'Architecture d'Urbanisme et d'Environment. Section Recherche (França)

Instituto Superior de Agronomia. Secção Autonoma de Arquitectura Paisagista.

Universidade Técnica de Lisboa (Portugal)

Department of Urban and Regional Planning. Aristotle

University of Thessaloniki (Grècia)

Instituto di Ricerche Ambiente Italia Srl (Itàlia)

Coordinador: Departament d'Urbanisme i Ordenació del Territori.

Universitat Politècnica de Catalunya (Espanya)

Summary

Objectives:

1. Develop a series of designs of new sustainable patterns for the low density residential areas that improve the environmental adequacy of current solutions. In that way proposed patterns have to be adapted to the specific character of Mediterranean landscapes as a climatic and cultural region. These patterns will be designed to act today in the same way as traditional constructions in urban and rural developments have done versus environmental policies and will function as an appropriate alternative to current touristic and suburban settlements very inadequate from the point of view of sustainability and not concerned with supporting and improving the identity of regions in South Europa.
2. The design of an informatic product that permits to introduce projectual arguments in the definition of parameters that describe territories in a global environmental vision and then an IAM -integrated assessment model- which introduces, in addition to the well -known system of environmental factors of common IEA, the visual and cultural aspects and, in that sense, to integrate planning policies with design issues of transformation.

Work content outline

1. Elaboration of an IAM (4 entries: environmental factors, image and cultural heritage aspects, planning and management, socio-anthropologic factors).
2. Design of new touristic/low density residential patterns.
3. Definition of the conditions assumed by the patterns (feedback the IAM).
4. Verify the adequacy of patterns. Introduction of uncertainty factors as probable alternative scenarios. Readjustment of the design of the patterns.
5. Verify the capacity of the areas through the multiplication of the selected patterns, establishment of limiting situations.
6. Configuration of criteria of implementation of new patterns in the Mediterranean region.
7. Final formulation of the Integrated Environmental Assessment.

From the point of view of the methodology, two entries of work are proposed. The first deals with the analysis of 6-12 units of 400 km², to the scale of 1:25.000 (during the

process through a sequential zoom we reach the scale 1:2.000) in countries such as Spain, Portugal, Greece, South of France and the South of Italy, understood as reference areas of characteristic landscapes. The second one consist of the research of new patterns based on recent needs associated with touristic developments and new lifestyles such as rural and “telework” developments and the study of the traditional types of residential units to the scale 1:2.000. Both are the basis to elaborate an IAM that can be translated in an informatic product directed to evaluate criteria of a sustainable implementation of new residential patterns in the mediterranean region.

Claimed innovative aspects of this proposal include:

- the introduction of visual parameters in the environmental assessment. The role of the image is considered basic in the pondering of values, especially in areas where sustainability is supported by the touristic development or in deteriorated ones where the achievement of a “good landscape” is vital for their revaloration.

- the incorporation of cultural factors in the environmental assessment which are considered as a means for the modeling of the form and the establishment of strong points in the area of cultural heritage. In that sense, the study of basic traditional settlements is of great significance.

- to consider the feed back process -patterns-IAM- to the re-design of new pattern and first proposal of IAM with the aim on one hand to integrate patterns into appropriate areas and on the other to directly improve both them and the IAM.

Projecte núm.: MAS3-CT98-0173.

Títol: [European Shore Platform Erosion Dynamics \(ESPED\)](#).

Centre: Departament de Ciències de la Terra. Edifici Guillem Colom Casasnovas.

Investigador principal: [FORNÓS ASTÓ, Joan Josep](#).

Categoria: TU (àrea de coneixement: Estratigrafia).

Socis europeus:

Institut de Géographie. Université de Nantes (França)
Centro de Geologia. Fundaçao da Faculdade de Ciencias da
Universidade de Lisboa (Portugal)

Department of Nature and Environment-Earth Sciencies. University of Karlstad (Suècia)

Coordinador: School of Chemistry, Physics and Environmental Science.

University of Sussex (Regne Unit)

Summary

The project aims to improve scientific knowledge and understanding of the development and downwearing of shore platforms and of the relationships between shore platform change and the rates of retreat of sea cliffs on the landward side of the platforms. Shore platforms are a major component of European rocky shore environments, but in the past there has been a dearth of hard data concerning the weathering and erosion of the platforms on which to base long-term planning strategies. The project brings together a multidisciplinary team of scientists from universities in five EU member states to employ a newly developed laser scanner and a standardised methodology. It will further understanding of the development and dynamic of shore platforms in contrasting rock types at sites representative of the full range of wave and tidal environments experienced around the shores of Europe, from the Mediterranean northwards along the Atlantic coast and into the Baltic.

Projecte núm.: BIO4-CT97-2215.

Títol: [Safety regulation of transgenic crops: completing the internal market? \(ELSA\)](#).

Centre: Departament de Filosofia. Edifici Ramon Llull.

Investigador principal: [LUJÁN LÓPEZ, José Luís](#).

Categoria: AJ. U (àrea de coneixement: Lògica i Filosofia de la Ciència).

Socis europeus:

International Centre for Human & Public Affairs (Holanda)

Coordinador: The Open University, Centre for Technology Strategy (Renge Unit)

Summary

The main objective of the project is to inform policy debates on the most appropriate form of EU safety regulation for the commercial use of transgenic crops, towards harmonizing criteria across the European internatl market. The commercial potential of agricultural biotechnology is becoming central to strategic choices for enhancinc economic competitiveness, environmental protection and sustainable development in the European Union. These strategic choices increase the controversy about biotechnology, as well as about ethical issues of how to define 'risk' and 'benefit'. The principal means available for handling this controversy has been safety regulation, though it was not designed to bear such a burden. This project will investigate, in 10 European countries, how the regulatory procedure respons to the controversy as transgenic crops approach the commercial stage. The results will inform policy discussions on the most appropriate form of safety regulation. In each country, locally-based researchers will investigate six main issues relating to safety regulation:

- i) regulatory boundaries (between environmental, food and herbicide safety)
- ii) normative judgements in safety decisions
- iii) risk-assessment research, its priorities and relevance
- iv) the labelling of transgenic seeds and foods
- v) how a European market is facilitated or restricted
- vi) links between pesticide regulation and other procedures.

Over-arching themes for the project are the dynamic links between precaution and commercialisation, and between predictability and acceptability. The diagram below illustrates how those links frame the six issues to be investigated.

Projecte núm.: FAIR-CT98-4365.

Títol: Otolith microchemistry as a means of identifying stocks of deep-water demersal fish (OTOMIC).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: MORALES NIN, Beatriz.

Categoria: Investigador científic CSIC.

Socis europeus:

University of Liverpool Port Erin Marine Laboratory (Regne Unit)

Coordinador: Scottish Association for Marine Science (Regne Unit)

Summary

The objective of this proposal is therefore to investigate the elemental composition of the otoliths of deep-water fish species using the latest ICP-MS techniques.

Projecte núm.: FAIR-CT96-1304.

Títol: European Fish-Network (EFAN).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: MORALES NIN, Beatriz.

Categoria: Investigador científic CSIC.

Socis europeus:

Coordinador: Institut of Marine Research “Flodewinger Marine Research Station”
(Noruega)

Summary

To develop a competent network of laboratoires with the capacity to develop, conduct and coordinate collaborative research and training, and thereby ensure that age determination becomes a reliable element of the assessments underlying the scientific management advice on fisheries and environmental resources

Objectives:

To stimulate international collaboration by offering services and facilities to workshops, conferences, visiting scientists and students focussing on ageing research and methods.

To recommend practical development of existing ageing methods, including computer techniques, with a view towards rationalising current practices while satisfying the demands for speed, accuracy and consistency.

To develop and update a library of methods descriptions and reference collections for different species and stocks for use in training and intercalibration exercises.

To improve the accuracy of current and new ageing procedures by recommending a range of verification procedures based on both classical and novel techniques.

Projecte núm.: FAIR-CT97-3522.

Títol: Impact fishery and environment on hake recruitment in Northwester Mediterranean (LLUCET).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: MORALES NIN, Beatriz.

Categoria: Investigador científic CSIC.

Socis europeus:

IFREMER (França)

Centre Universitario di Biologia Marina ed Ecologia Applicata (Itàlia)

Università degli Studi di Genova (Itàlia)

Coordinador: Instituto de Ciencias del Mar (CSIC)

Summary

Objetives:

The main objective of this proposal is to study the relationships between the recruitment process of European hake(*Merluccius merluccius*) and its fishery in the NW Mediterranean.

This objective is itemised as follows:

To analyse the effects of the young hake fishery on the demersal community, This includes the effect of fishing on the demersal communities and the geographic allocation of the fishing effort.

Study of the hake recruitment processes. Spatial distribution of eggs and larvae.Settlement process. Juveniles and larval growth and ecology.

To analyse the impact of the fishery on the spawning stock.

Projecte núm.: 97/0084.

Títol: Environment and biology of deep-water species *Aphanopis carbo* in NE Atlantic: basis for its management (BAS BLACK).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: MORALES NIN, Beatriz.

Categoria: Investigador científic CSIC.

Socis europeu:

Scottish Association for Marine Science (Regne Unit)

Marine Laboratoire (MARLAB) (Regne Unit)

Instituto Español de Oceanografía (Espanya)

Direcção-General dos Pescas (Portugal)

Universidade dos Açores (Portugal)

Coordinador: Instituto Portugues de Investigação do Mar (Portugal)

Summary

The objective of this Project will be to provide the basis for the development and implementation of a programme for the routine study and management of the black scabbardfish. Owing to the lack of biological and environmental information critical for the assessment and management of the species a special effort will be put into investigations of its biology, stock discrimination and habitat characterisation.

Projecte núm.: MAS3-CT97-0153.

Títol: Effects of entrophicated seawater on rocky shore ecosystems studied in large littoral mesocosm (EULIT).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigador principal: DUARTE QUESADA, Carlos.

Categoria: Professor d'investigació del CSIC.

Socis europeus:

Roskilde Universitet Center (Dinamarca)

Aabo Akademi University (Finlàndia)

Stockholms Universitet (Suècia)

Chistian-Albrechts Universität Kiel (Alemanya)

Norsk Hydro AS (Noruega)

Coordinador: Norwegian Institute for Water Research (Noruega)

Summary

Objectives

The overall objectives are to predict the response of rocky ecosystems to increased nutrient availability by

- 1) modelling the changes in ecosystem processes
- 2) evaluating the increased production of herbivores
- 3) assessing effects on growth responses of key organisms
- 4) predicting the resulting ecosystem structure and metabolism.

In doing so, EULIT would allow the formulation of tolerable nutrient inputs to coastal waters, and to evaluate the capacity for increased production of animal protein as a side benefit of the buffering effect exerted by herbivores.

Projecte núm.: IC18-CT98-0292.

Títol: Prediction of the resilience and recovery of distribeb coastal communities in the tropics (PREDICT).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigador principal: DUARTE QUESADA, Carlos.

Categoria: Professor d'investigació del CSIC.

Socis europeus:

Hanoi National Pedagogic University (Vietnam)

Instituto do Mar (Portugal)

University Wales (Regne Unit)

Kobenhvns Universitet (Dinamarca)

Internat.Instit. for Infrastrustural ,Hydraulic and Envir. Engineering (Holanda)

University of the Philippines (Filipines)

Coordinador: Institut Mediterrani d'Estudis Avançats (IMEDEA)

Summary

The objective is to contribute to the sustainability of SE Asian coastal ecosystems through the development of models predicting the resilience os Se Asian seagrass and mangrove ecosystems against human pressure. These models, simple enough as to be readily embedded in current frameworks for integrated coastal management, will assist decissions by coastal managers an policy makers.

Projecte núm.: FMRX-CT96-0066.

Títol: [Microlasers and cavity QED](#).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA). Edifici Mateu Orfila i Rotger.

Investigador principal: [SAN MIGUEL RUIBAL, Maximino](#).

Socis europeus:

Imperial College (Regne Unit)

Max-Planck-Institut fur Quantum Optik (Alemanya)

France Telecom (França)

University of Leiden (Holanda)

Ecole Normale Superieure (França)

Università La Sapienza (Itàlia)

Coordinador: University of Ulm (Alemanya)

Summary

The objectives of this network are twofold and are concerned with both theoretical and experimental results. On the theoretical side, the general objective is to gain a better understanding of microlasers and cavity QED through the establishment of more elaborate theories than existing ones. On the experimental side, the objectives are to demonstrate the effects predicted by the new theories and to propose compact sources of light with tailored quantum noise and methods of measurement taking advantage of the quantum properties of the field.

Projecte núm.: FAIR-CT95-0655.

Títol: [Developing deepwater fisheries: data for their assessment and for understanding their interaction with an impact on a fragile environment.](#)

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: [MORALES NIN, Beatriz.](#)

Categoria: Investigador científic del CSIC.

Socis europeus:

IFREMER. Laboratoire des Ressources Halieutiques (França)
Università degli Studi di Bari (Itàlia)
National Centre for Marine Research (Grècia)
Instituto Portugues de Investigaçao Maritima (Portugal)
Marine Research Institute of Iceland (Islàndia)
Coordinador: Scottish association for Marine Science (Escòcia)

Projecte núm.: Esprit project núm. 28235.

Títol: [Patterns in active nonlinear optical systems.](#)

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA). Edifici Mateu Orfila i Rotger.

Investigador principal: [BALLE MONJO, Salvador.](#)

Socis europeus:

Intitut Nonlinéaire de Nice (França)
University of Strathclyde (Regne Unit)
University of Braunschweig (Alemanya)
Università degli Studi di Milano (Itàlia)
Coordinador: CNET (França)

Projecte: Projecte cooperatiu amb Xile (conveni CSIC-Universitat de Xile).

Títol: [Efectos del ruido en sistemas lejos del equilibrio.](#)

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA). Edifici Mateu Orfila i Rotger.

Investigador principal: [SAN MIGUEL RUIBAL, Maximino.](#)

Membres de l'equip	Categoria
San Miguel Ruibal, Maximino	CU
Toral Garcés, Raúl	CU

Soci internacional: Departament de Física, Universitat de Xile.

Projecte: Acció COST.

Títol: [Study on obesity and functional foods in Europe.](#)

Centre: Departament de Biologia Fonamental i Ciències de la Salut. Edifici Guillem Colom Casanovas.

Investigador principal: [PALOU OLIVER, Andreu.](#)

Categoria: CU (àrea de coneixement: Bioquímica i Biologia Molecular).

Projecte: Acció COST 918.

Títol: [Body weight and energy expenditure. Functional food and nutrition technology.](#)

Centre: Departament de Biologia Fonamental i Ciències de la Salut. Edifici Guillem Colom Casanovas.

Investigador principal: [PALOU OLIVER, Andreu.](#)

Categoria: CU (àrea de coneixement: Bioquímica i Biologia Molecular).

Projecte: Acció COST 268.

Títol: [Wavelength scale photonic components for telecommunications.](#)

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA). Edifici Mateu Orfila i Rotger.

Investigador principal: [SAN MIGUEL RUIBAL, Maximino.](#)

Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

Projecte: Acció COST 267.

Títol: [Semiconductor devices for signal processing.](#)

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: [BALLE MONJO, Salvador.](#)

Categoria: TU (àrea de coneixement: Física de la Matèria Condensada).

Projecte: Programa de cooperació científica con Iberoamèrica 1998-1999.

Títol: [Aplicaciones del principio de máxima entropía al estudio de sistemas ligados por interacción electromagnética y/o fuerte en el espacio de coordenadas y en el espacio de momentos.](#)

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigadors principals: [CASAS AMETLLER, Montserrat;](#) [PLASTINO, Àngel.](#)

PROJECTES FINANÇATS PER:

**Comissió Interministerial de Ciència i Tecnologia (CICYT),
Govern Espanyol**

**Direcció General d'Investigació Científica i Tècnica (DGICYT)/Direcció General
d'Ensenyament Superior (DGES)/Direcció General d'Ensenyament Superior i
Investigació Científica (DGESIC)
Ministeri d'Educació i Cultura**

**Conselleria d'Educació, Cultura i Esports,
Govern Balear**

DEPARTAMENT DE BIOLOGIA

- **Receptores de imidazolinas y adrenoceptores alfa-2 en sistema nervioso central: caracterización bioquímica/molecular y regulación fisio-farmacológica y patológica.** GARCIA SEVILLA, Jesús Andrés
- **Especiación por aislamiento geográfico en coleópteros: análisis genético y citogenético.** PETITPIERRE VALL, Eduard
- **Mecanismos de resistencia al complemento y a los agentes antimicrobianos basados en las porinas de *Klebsiella pneumoniae*.** BENEDÍ BENITO, Vicente Javier
- **Evolución molecular de la interacción entre genes y genomas: de bacterias de vida libre a endosimbiontes, mitocondrias y supergenes.** CASTRO OCÓN, José Aurelio
- **Mecanismos adaptativos de la raíz al estrés iónico.** CABOT BIBILONI, Catalina
- **Análisis genético a nivel de STRs y secuenciación de la región I del mtDNA. Aplicación de la evolución de las poblaciones chuerta y balear y a la genética de la otopresión y la miopía.** RAMON JUANPERE, Misericòrdia
- **Evaluación de la efectividad de los arrecifes artificiales de la Bahía de Palma.** MORENO CASTILLO, Isabel
- **El estado ecológico de los rios temporales en ambientes insulares.** MOYÀ NIELL, Gabriel
- **Fauna Ibérica IV (Chrysomelidae).** RAMOS SÁNCHEZ, M. Ángeles, PETITPIERRE VALL, Eduard.
- **Oceanografía física y productividad en la confluencia Weddell-Scotia: contribución española al proyecto internacional DOVETAIL (E-DOVETAIL).** GARCIA LÓPEZ, Marc A.
- **Respuestas de la vid al riego moderado: efectos en los flujos de savia, crecimiento y fotosíntesis, maduración y calidad del fruto.** MEDRANO GIL, Hipólito.
- **Biodegradación de compuestos aromáticos; modelo de naftaleno y sus derivados.** LALUCAT JO, Jordi.
- **Papel de la molécula de la membrana externa de bacterias gram-negativas: como inmunomodulador de la prevención y tratamiento de procesos infecciosos en avicultura.** TOMÁS MAGAÑA, Juan
- **Moléculas de la membrana externa y estructuras adicionales de tres bacterias gram-negativas implicadas en la virulencia: estudio genético y su uso como vacunas.** TOMÁS MAGAÑA, Juan
- **Diseño de control integrado de la mosca mediterránea de la fruta (*Ceratitis capitata*, Wied.) mediante nuevas tecnologías no contaminantes, compatibles con una agricultura sostenible en Baleares.** GOMILA SALAS, Joan
- **Mejora de la tecnología de obtención, almacenamiento, germinación y uso de semillas de especies silvestres utilizadas en los planes de reforestación y revegetación de la Comunidad Valenciana.** GARCÍA FALLOS, P.
- **Riego de apoyo en vid para vinificación de tintos.** CASTEL SÁNCHEZ, Juan Ramón.
- **Patrones morfológicos en partes esqueléticas de moluscos actuales y fósiles. Origen e implicaciones evolutivas.** CHECA GONZÁLEZ, Antonio Gerardo

Projecte núm.: PB94-0002-C (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Receptores de imidazolinas y adrenoceptores alfa-2 en sistema nervioso central: caracterización bioquímica/molecular y regulación fisio-farmacológica y patológica.

Codis UNESCO: 320909.

Centre: Departament de Biologia. Edifici Guillem Colom Casasnovas.

Investigador principal: GARCIA SEVILLA, Jesús Andrés.

Categoria: CU (àrea de coneixement: Farmacologia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Garcia Sevilla, Jesús Andrés	CU	32
Miralles Socias, Antoni	TU	32
Esteban Valdés, Susana	TU	32
Olmos Bonafé, Gabriel	TEU	32
Ribas Núñez, Catalina	B	40
Ventayol Bosch, Pere	B	40
Ozaita Mintegui, Andrés	B	40

Nombre total d'investigadors de la UIB: 7.

Total EJC/setmana: 6,2.

Summary

The aim of this project is to characterize further the biochemistry/molecular biology as well as the physio-pharmacologic regulation of imidazoline receptors and alpha-2 adrenoceptors in the central nervous system. The imidazoline receptor, I₂ type, are new molecular entities which appear to be associated with the the enzyme MAO-B and with the expression of GFAP in glial cells. The project therefore will assess the involvement of these receptors in the pathophysiology of endogenous depression and Alzheimer's disease.

Projecte núm.: PB96-0090 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Especiación por aislamiento geográfico en coleópteros: análisis genético y citogenético.](#)

Codis UNESCO: 2409.

Centre: Departament de Biologia. Edifici Guillem Colom Casanovas.

Investigador principal: [PETITPIERRE VALL, Eduard.](#)

Categoria: CU (àrea de coneixement: Genètica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Petitpierre Vall, Eduard	CU	16
Pons Pons, Joan	Aj. EU	32
Oromí Masoliver, Pedro		32
Garín, Claudia Fabiana	B	40
Gómez-Zurita Frau, Jesús	B	40
Garnería Pico, Irene	B	40

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 4,2.

Summary

Keywords: genetic differentiation, coleoptera, geographic isolation, speciation, phylogeny.

The Canarian archipelago and the mountain ranges of Iberian Peninsula may be considered as natural laboratories for studying the genetic differentiation of endemic species of coleopterans belonging to the genera *Pimelia*, *Hegeter* (Tenebrionidae), *Timarcha* and *Chrysolina* (Chrysomelidae). These species are characterized by their low dispersal capacity and many of them have been previously investigated in several genetic features. The nucleotide sequences of satellite DNAs in species of *Pimelia* and *Hegeter*, those of mtDNA gene COII and nuclear rDNA spacers in *Timarcha* and *Chrysolina*, will be used as genetic markers to determine the degree of evolutionary divergence and build up phylogenetic trees through appropriate algorithms. The molecular findings will be compared with those derived from molecular cytogenetic analyses on the same species by fluorescent in situ hybridization (FISH) using satDNA probes in *Pimelia* and *Hegeter*, and of ribosomal DNA of 18-28S and 5S in the four genera subjected to study.

Projecte núm.: PB96-0197 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Mecanismos de resistencia al complemento y a los agentes antimicrobianos basados en las porinas de *Klebsiella pneumoniae*.

Codis UNESCO: 320103.

Centre: Departament de Biologia. Edifici Guillem Colom Casasnovas.

Investigador principal: BENEDÍ BENITO, Vicente Javier.

Categoria: TU (àrea de coneixement: Microbiologia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Benedí Benito, Vicente Javier	TU	16
Barceló Mairata, Francesca	TU	16
Gil Sánchez, José	As.	40
Hernández Allés, Santiago	B	40
Álvarez Díaz, Dolores	B	40
Rubires Ferrer, Francesc X.	B	40

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 4,8.

Summary

Keywords: *K. pneumoniae*, outer membrane, porins, LPS, complement, antimicrobials.

Previous results obtained by our group have demonstrated the important role of outer membrane components, particularly lipopolysaccharide and porins, in the resistance of *K. pneumoniae* to complement-mediated killing and antimicrobial agents. The present project aims to more detailed study of the role of the above two surface components in the cited resistance phenomena by:

1. Determining the unknown bases of complement resistance in lipopolysaccharide O-hospital-occurring isolates.
2. Structural characterization of the site(s) within the OmpK36 porin responsible for the binding of complement component C1q and subsequent antibody-independent activation of the complement system.
- And 3. Determine the mechanisms that lead to the loss of porin expression or the expression of altered porin forms with the subsequent increases in antimicrobial resistance levels.

Projecte núm.: PB96-0793-C04-04 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Evolución molecular de la interacción entre genes y genomas: de bacterias de vida libre a endosimbiontes, mitocondrias y supergenes.

Codis UNESCO: 2409.

Centre: Departament de Biologia. Edifici Guillem Colom Casanovas.

Investigador principal: CASTRO OCÓN, José Aurelio.

Categoria: TU (àrea de coneixement: Genètica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Castro Ocón, José Aurelio	TU	16
Ramon Juanpere, Misericòrdia	TU	16
Picornell Rigo, Antònia	Aj. EU	16
Terrassa Pont, Bàrbara	As.	16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 1,6.

Summary

Keywords: symbiosis, molecular coevolution, genomic conflict, darwinian selection, neutral theory, supergen, nucleous-mitochondria interaction.

Compared to endogenous evolutionary processes, symbiosis is a rare event that increases genetic complexity and the appearance of evolutionary novelties. However, it played an important part in the origin of eukaryotes, and has also been invoked to explain the origin of chromosomes and of the first cells. Nevertheless, the evolutionary success of the symbiotic interactions occurs within biological entities that, depending on the hierarchical level, compete for diverse resources. This competition could result in a genomic conflict between the symbiotic partners and the new symbiotic entity. The aim of the present grant proposal is to elucidate the role that Darwinian selection could play in the evolution and maintenance of: a) the symbiosis between *Buchnera aphidicola*, the endosymbionts of aphids, which is suffering deep structural and regulatory changes compared to close free living bacteria such as *E. coli*; b) the interaction between nuclear and mitochondrial genomes (as a consequence of a very ancient symbiotic process) in *Drosophila subobscura*, for which we have already identified mitochondrial haplotypes exhibiting presumptive fitness differences, and c) chromosome rearrangements (considered as supergenes) in *D. subobscura*, organisms which shows a high plasticity in the generation and adaptive maintenance of chromosomal polymorphisms. The methodology involved in the present proposal is quite diverse, covering from the analysis of the structure and regulation of different genes, to the molecular population and phylogenetic analysis. In reference to section a), we pretend to implement a new methodology, the so called 'molecular coevolution', consisting in the comparative study of the evolution of genes coding for subunits interacting in the same protein complex, that could be encoded in different genomes. This methodology goes beyond the aims of the present proposal, but has been included as an objective because it can also be very useful to unveil the transformations occurred in genomes involved in symbiosis and their causes.

Projecte núm.: PB97-0163-C02-02 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Mecanismos adaptativos de la raíz al estrés iónico.

Codis UNESCO: 241719.

Centre: Departament de Biologia. Edifici Guillem Colom Casanovas.

Investigadora principal: CABOT BIBILONI, Catalina.

Categoria: TU (àrea de coneixement: Biologia Vegetal).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cabot Bibiloni, Catalina	TU	32
Llorens Garcia, Lleonard	TU	32
Bennàsar Roig, Antoni	CEU	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 2.

Summary

The primary effects of potentially toxic concentrations of Na⁺ and Cl⁻ on root physiology will be studied using plan genotypes that exhibit considerable differences in salt stress resistance or tolerance (*Phaseolus vulgaris*, *Medicago arborea* and *Medicago citrina*), in order to distinguishing between those alterations that are specifically related to higher stress resistance or tolerance from those that only induce multiple secondary strains which lead to inespecific defense mechanisms that are unable to protect plants from ion toxicity.

Projecte núm.: PM97-0041 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Análisis genético a nivel de STRs y secuenciación de la región I del mtDNA. Aplicación de la evolución de las poblaciones chueta y balear y a la genética de la otosclerosis y la miopía.

Codis UNESCO: 2409.

Centre: Departament de Biologia. Edifici Guillem Colom Casanovas.

Investigadora principal: RAMON JUANPERE, Misericòrdia.

Categoria: TU (àrea de coneixement: Genètica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Ramon Juanpere, Misericòrdia	TU	16
Castro Ocón, José Aurelio	TU	16
Picornell Rigo, Antònia	Aj. EU	16
Rosell Andreo, Jordi	As.	16
Oliver Capó, Gabriel		16
Frau Rotger, Elisabet		16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 1,6.

Summary

Keywords: chuetas, STRs, mtDNA, human populations, genetics of myopia, genetics of otosclerosis.

The aim of the project is to study the genetics of the human population of the Balearic Islands by means of the analysis of individuals from Majorca, Minorca, Ibiza and Chueta populations. The level of polymorphism in nuclear genes (STRs) and in the hypervariable region I of mtDNA will be detected. We will establish the filogenetic relationship between our populations and between them and other mediterranean ones of the literature. We are specially interested in confirming the Jewish origin of the Chueta population and also the different substrata of Ibiza Island that previous studies have indicated. The comparison between the evolution nuclear patterns (STRS and hematic markers) and the mitochondrial ones (RFLPs and sequence of region I) provides information about the differences in evolution taxa and also the dynamics of female-vs male mediated movement of DNA in Chueta and Ibiza populations. The study of diseases with a genetic study of myopia and otosclerosis in Balearic Islands. The patterns of inheritance of both diseases and their probable association with hematic markers will be determined with family studies. Also the existence of linkage disequilibria between STRs and disease genes will be tested.

Projecte núm.: MAR98-0258-C05-01 (DGES). Programa nacional de ciència i tecnologia marines.

Títol: Evaluación de la efectividad de los arrecifes artificiales de la Bahía de Palma.

Codis UNESCO: 2510, 3105.

Centre: Departament de Biologia. Edifici Guillem Colom Casasnovas.

Investigadora principal: MORENO CASTILLO, Isabel.

Categoria: CU (àrea de coneixement: Biologia Animal).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Moreno Castillo, Isabel	CU	32
Coll Monserrat, Josep	As.	32
Haroun Tabraue, Ricardo Jesús		16
Castro Hernández, José Juan		16
Mas Hernández, Julio		16
Marcos Diego, Concepción		16
García Charton, José Antonio		16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 1,6.

Summary

Keywords: artificial reefs, coastal resources, artisanal fisheries, recruitment, protected marine areas.

The work which project we present intends to check "in situ" the results of artificial reef deployment in the littoral zone of different spanish coastal areas. The direct effects, in the short and long run, on the tarjet species of the artisanal fleet and the relation of the artificial reef with the natural environment from the fish aggregation, response to fishing pressure, juvenile recruitment and sea bed regeneration points of view are studied. With it, we obtain knowledge on how the artificial reefs work, with the threefold aim of: 1° answer the questions the administration has now open in this respect, 2° obtain more basic scientific knowledge on the coastal artificial reef ecosystem and 3° contribute to the European Artificial Reef Research Network with data of our reefs to the whole knowledge on artificial reefs in the European Community.

Projecte núm.: HID98-0323-C05-02. Programa nacional de recursos hídrics.

Títol: El estado ecológico de los rios temporales en ambientes insulares.

Codis UNESCO: 250811, 250805.

Centre: Departament de Biologia. Edifici Guillem Colom Casanovas.

Investigador principal: MOYÀ NIELL, Gabriel.

Categoria: TU (àrea de coneixement: Ecologia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Moyà Niell, Gabriel	TU	16
Ramon Pérez de Rada, Guillem	TU	16
Martínez Taberner, Antoni	TU	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Summary

Keywords: ecological status, water quality, macroinvertebrates, riparian forest.

The recent proposal of Freshwater Framework Directive (published in 27.2.1997; COM(97) 49 final) implies that member states of the EU should elaborate in the future maps of ecological status of their aquatic ecosystems, including rivers. The ecological status concept is mainly based in the qualification of freshwater quality using its biological components. The objective of our project is to study 10 mediterranean rivers in Spain where the establishment of their ecological status may present several difficulties due to ecological conditions of these rivers (droughts, flash floods). This fact means that methodological problems can be a bottleneck of the applications of these indices to mediterranean rivers and, therefore, studies have to be performed in order to solve these methodological problems. We propose to study 10 rivers basins in the mediterranean coast of Spain with the same sampling systems and data treatment. The result must help us to define an integrate index that using the biological quality of waters and the conservation of the riparian forest, allow us to classify the mediterranean rivers in the five classes of ecological status defined in the proposal of Freshwater Framework Directive. At the moment when the directive should be implemented, managers and policy makers will have a valuable instrument of water quality qualification in order to produce the ecological status maps. This system can be, probably, applied to many other Spanish rivers with minor changes.

Projecte núm.: PB95-0235 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Fauna Ibérica IV \(Chrysomelidae\)](#).

Codis UNESCO: 2401.

Centre: Departament de Biologia-IMEDEA.

Investigadora principal: [RAMOS SÁNCHEZ, M. Ángeles](#).

Investigador responsable: [PETITPIERRE VALL, Eduard](#).

Categoria: CU (àrea de coneixement: Genètica).

Veure Institut Mediterrani d'Estudis Avançats (pàgina 198)

Projecte núm.: ANT96-0866 (CICYT). Programa nacional d'investigació a l'Antàrtida

Títol: [Oceanografía física y productividad en la confluencia Weddell-Scotia: contribución española al proyecto internacional DOVETAIL \(E-DOVETAIL\)](#).

Centre: Universitat Politècnica de Catalunya.

Investigador principal: [GARCIA LÓPEZ, Marc A.](#)

Veure Institut Mediterrani d'Estudis Avançats (pàgina 209)

Projecte núm.: AGF97-1180. Programa nacional d'investigació i desenvolupament agrari.

Títol: [Respuestas de la vid al riego moderado: efectos en los flujos de savia, crecimiento y fotosíntesis, maduración y calidad del fruto](#).

Codis UNESCO: 310205, 241719.

Centre: Departament de Biologia-IMEDEA. Edifici Guillem Colom Casanovas.

Investigador principal: [MEDRANO GIL, Hipólito](#).

Categoria: CU (àrea de coneixement: Biologia Vegetal).

Veure Institut Mediterrani d'Estudis Avançats (pàgina 203)

Projecte núm.: BIO97-0639. Programa nacional de biotecnologia.

Títol: [Biodegradación de compuestos aromáticos; modelo de naftaleno y sus derivados](#).

Centre: Departament de Biologia-IMEDEA. Guillem Colom Casanovas.

Investigador principal: [LALUCAT JO, Jordi](#).

Categoria: CU (àrea de coneixement: Microbiologia).

Veure Institut Mediterrani d'Estudis Avançats (pàgina 202)

Projecte núm.: 2FD97-0287 (DGES). Fondos FEDER.

Títol: Papel de la molécula de la membrana externa de bacterias gram-negativas: como inmunomodulador de la prevención y tratamiento de procesos infecciosos en avicultura.

Centre: Universitat de Barcelona.

Investigador principal: TOMÁS MAGAÑA, Juan.

Membres de l'equip	Categoria
Tomás Magaña, Juan	
Reguè Queralt, Miquel	
Merino Montero, Susana	
Benedí Benito, Vicente Javier	TU
Albertí Serrano, Sebastià	As.
Vivanco, Fernando	

Nombre total d'investigadors de la UIB: 2.

Summary

Keywords: lipopolysaccharine, outer-membrana proteins, immunostimulants, vaccines.

Two main goals are proposed in this project: 1. Increase the immunoactivity of an already registered product by changing the adjuvant used until now by outer-membrane molecules (porins, the major outer-membrane proteins) from the same microorganism used for the production of the active principle (lipopolysaccharine, other outer-membrane molecule). Recently published studies showed that porins are good adjuvants; and 2. The use of outer-membrane molecules (outer-membrane proteins like aerobactin/transferrin receptors or adhesins) from enteric pathogenic strains of avian source, which should be grown under conditions promoting expression of these molecules, as immunoprotective molecules (vaccines) against these bacterial infections.

Projecte núm.: PB97-0932 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Moléculas de la membrana externa y estructuras adicionales de tres bacterias gram-negativas implicadas en la virulencia: estudio genético y su uso como vacunas.

Centre: Universitat de Barcelona.

Investigador principal: TOMÁS MAGAÑA, Juan.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Tomàs Magaña, Juan		32
Reguè Queralt, Miquel		32
Merino Montero, Susana		32
Benedí Benito, Vicente Javier	TU	16
Aguilar Martínez, Alicia		40
Nogueras Mas, María Mercedes		40

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,4.

Summary

Keywords: lipopolysaccharide, proteins, other surface molecules, genetic studies, virulence.

We wish study in detail the different bacterial surface molecules of *Klebsiella pneumoniae*, *Serratia marcescens* and *Aeromonas hydrophila*, which are involved in the virulence of these Gram-negative bacteria. The study will go deeper in the genetic aspects (sequencing of the clones already obtained in previous studies by us or cloning some genes not previously obtained), as well as the study foculs on the involvement degree of these molecules on virulence (mainly by comparing in pathogenicity and virulence test, the last ones in vivo in mice, using wild type strains and isogenic mutants obtained by allelic recombination). The use of these molecules as a vaccine, ranging from a simplified formulation as purified molecules and active immunoprotection to more complex formulations as life cells vaccines or naked DNA vaccines, seems faisible that may exert a preventive effect againts the infections evoked by these bacteria or similar ones.

Projecte núm.: SC98-016-C2-2. Programa sectorial d'I+D agrari i alimentari del MAPA.

Títol: Diseño de control integrado de la mosca mediterránea de la fruta (*Ceratitis capitata*, Wied.) mediante nuevas tecnologías no contaminantes, compatibles con una agricultura sostenible en Baleares.

Investigador responsable: GOMILA SALAS, Joan.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Gomila Salas, Joan		
Durà Blasco, Antoni		
Alemany Ferrà, Aina	TU	24
Miranda Chueca, Miguel Ángel	Aj. EU	24

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 1,2.

Summary

A two years project was planned among de INIA, the Conselleria d'Agricultura of the Balearic Government, and the University of the Balearic Islands. The main objective of the project was to diminish the use of insecticides in the orchard, reducing the level of residues in the fruit and the negative impact on the environment. A mass trapping strategy was designed using the new female medfly food synthetic attractants (pustrecine, trimethylamine and ammonium acetate), combined in the field with traps baited with trimedlure and nulture attractants. Furthermore, in order to improve the actual *Ceratitis capitata* (Wied.) control practices, we included population dynamics and bioecology studies in the area, as an assessment tool based in the prediction of population seasonal fluctuations. The subproject taking out by the UIB research group was implemented in Soller (northwest of Mallorca island).

Projecte núm.: 1FD97-551 (CICYT). Fondos FEDER.

Títol: Mejora de la tecnología de obtención, almacenamiento, germinación y uso de semillas de especies silvestres utilizadas en los planes de reforestación y revegetación de la Comunidad Valenciana.

Centre: Centre d'Investigacions sobre Desertificació (València).

Investigador principal: GARCÍA FALLOS, P.

Membres de l'equip	Categoria
García Fallos, P. Medrano Gil, Hipólito	CU

Nombre total d'investigadors de la UIB: 1.

Summary

Keywords: polinization, masting, seed predation, germination, recalcitrant seeds, forestal species, afforestation, revegetation, seed losses by erosion, plant colonization.

The new conception of vegetal restoration plans that started in the 90s in the Valencia Community have run against the lack of information about the reproductive ability of the species to be used. The local government and the companies in charge of providing these species have a limited capacity to produce enough amounts of seeds and seedlings to carry out the mentioned plans. On regarding the vegetal restoration of anthropic steep slopes, the so far obtained results have not been successful. The traditional successful techniques of the rest of Europe have not given good results when applied in the environmental regional conditions of unpredictable long droughts and short intense rain events. When complements are added to the seeds in order to avoid those problems, the economic cost per unit area becomes much higher. On the one hand, to find a solution to the problems of seed production and germination and to divulge the improved techniques among the sectors in charge of collecting seeds, are important social and economic benefits for the private and public companies implied in the reforestation and revegetation plans since they may contribute to reduce costs and increase efficiency. Also the ultimate beneficiary, which is our Environment, takes advantage since the proportion of degraded areas may decrease but also a reduction of the environmental impact is expected since the indiscriminate collection of seeds in wild populations might be reduced considerably. Respect to the anthropic slopes, the evaluation of the seed resistance to erosion of the current species used along with the selection of new species based in their tolerance to run-off and their ability to expand their populations under contrasted climatic conditions, will improve the efficiency of the restoration plans to minimise the environmental impact after building motorways, railways, gas piping, and other building sites object of big public works.

The objectives of the proposal are :

- 1.- To ascertain what are the factors limiting the seed production of the species recommended in the Afforestation and Revegetation plans of the Valencia Community (1994-1999) and how they act. The aims are to design specific protocols of seed collection based in aprioristic factors and to establish a territorial net of areas to collect seeds with the maximum efficiency.
- 2.- To establish protocols for the recommended species that maximise their speed and germination rates.

3.- To divulge among the potential users (people collecting seeds, local administration organisms, seed banks, plant nurseries etc.) the results obtained once objectives 1 and 2 are achieved.

4.- To establish a method to store seeds of the *Quercus* species included in the above plans aiming to enlarge their germination capacity at least during two years following collection.

5.- To produce a reasonable list of species useful for the vegetal restoration of anthropic steep slopes taken into account the currently used species as well as the new tested species proved to have a relatively high success in their establishment and their capacity of expansion under the climatic and the lithological conditions of the Valencia Community. A model will be previously designed to know in advance the susceptibility of these seeds to be eroded. The model will take into consideration the characteristics of the seeds, the lithological and the climatic factors, and also the effects of the addition of complements to the seeds.

6.- To evaluate under field conditions the ability to survive and the ecophysiological characteristics of the seedlings of three shrub species commonly used in the restoration of anthropic steep slopes with those of the same species treated with endomicorhyzes.

Apart from the new methodological aspects, the lack of basic information about some of the considered species are the main innovative achievements since the obtained results in the objectives 1, 2 and 5 would be completely new. The innovative characteristic of objective 3 is to make the joint effort to collect, select, and divulge the existing information together with the new information obtained. To improve the post-harvest techniques is the main result expected from objective 4. The achievements in objective 6 will allow to evaluate until what extent the plants treated with endomicorhizes that give relatively good results in laboratory and nursery, succeed under field conditions.

The proposal is relevant for the Valencia Community from the institutional, economical and social point of view since there is no balance between the social demand (protection and restoration of the environment) and the offer coming from the administration and the companies. The results may be applicable in a short term but the generated information is also useful in a long-term period especially in the aspect of the management of the Mediterranean-like ecosystems.

Projecte núm.: 1FD97-1276 (CICYT). Fondos FEDER.

Títol: Riego de apoyo en vid para vinificación de tintos.

Centre: Institut Valencià d'Investigacions Agràries.

Investigador principal: CASTEL SÁNCHEZ, Juan Ramón.

Membres de l'equip	Categoria
Castel Sánchez, Juan Ramón	
Cebolla Rosell, Vicente	
Ferrer Talón, Pedro	
Haba Ejarque, Manuel	
Chirivella Romero, Camilo	
Medrano Gil, Hipólito	CU
Tortosa, Enric	
Catalán García, Francisco	

Nombre total d'investigadors de la UIB: 1.

Summary

Keywords: Drip irrigation, red wine, yield, quality.

The global objective of this project is the study of deficit irrigation strategies in grapevine for red wine production with the aims of improving yield and maintaining or improving wine quality. For this purpose field experiments and physiological studies will be carried out in cv. Tempranillo in two contrasting climatic locations (Requena, Valencia and Consell, Mallorca) in comparison to the varieties of major local importance (Bobal and Manto Negro, respectively). The main aspects of this study will be:

1. Relationships between soil water availability, transpiration (sap flow) and photosynthesis at plant level.
2. Vegetative and productive grapevine responses to moderate amounts of irrigation applied in different phenological phases.
3. Fruit and wine quality parameters for production of red and rosé wines.

The information obtained through these experiments should constitute an important basis to evaluate the economical impact of moderate irrigation in grapevines for red wine production, thus providing objective criteria for the respective A.D.C. Councils.

Projecte núm.: PB97-0790 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Patrones morfológicos en partes esqueléticas de moluscos actuales y fósiles. Origen e implicaciones evolutivas.

Centre: Universidad de Granada.

Investigador principal: CHECA GONZÁLEZ, Antonio Gerardo.

Categoria: TU

Membres de l'equip	Categoria	Dedicació (h/setm.)
Checa González, Antonio Gerardo		
Gallego Castejón, Luis	CU	32

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,8.

DEPARTAMENT DE BIOLOGIA FONAMENTAL I CIÈNCIES DE LA SALUT

- **Influencia del componente graso de la dieta sobre la absorción intestinal de ácido oléico.** TUR MARÍ, Josep Antoni
- **Significado de las espigas de alto voltaje del EEG de reptiles en relación con el sueño y la epilepsia.** RIAL PLANAS, Rubén Víctor
- **Regulación por nutrientes de la termogénesis y genes relacionados con la obesidad.** PALOU OLIVER, Andreu
- **Estudio de los hábitos alimentarios y parámetros nutricionales de la población balear.** TUR MARÍ, Josep Antoni

Projecte núm.: FIS93-1172. Fons d'Investigació Sanitària.

Títol: Influencia del componente graso de la dieta sobre la absorción intestinal de ácido oléico.

Codis UNESCO: 241107.

Centre: Departament de Biologia Fonamental i Ciències de la Salut. Edifici Guillem Colom Casanovas.

Investigador principal: TUR MARÍ, Josep Antoni.

Categoria: TU (àrea de coneixement: Fisiologia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Tur Marí, Josep Antoni	TU	20
Alperi Pajares, Susana		12
Esteban Valdés, Susana	TU	20
Prieto Almirall, Rafael María	Aj. EU	20
Rayó Amengual, Joana Maria	Aj. U	20
Sastre Sagreras, Maria Magdalena		12
Tur Marí, Josefina	As.	12

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2,3.

Summary

Keywords: fatty acids, fatty acid binding protein (FABP).

The aim of this project is to go deeply into the knowledge of the effect of the dietary fat on the intestinal absorption of fatty acids. To examine this influence microvillous plasma membrane (MVM) vesicles are going to be prepared from rats fed with diets of different lipid content (high fat or low fat content) and fat composition (saturated, unsaturated or polyunsaturated fatty acids), incubated with oleic acid, and then kinetics of vesicular mediated transport (MVM-FABP) determined.

Projecte núm.: FIS97-1032. Fons d'Investigació Sanitària.

Títol: Significado de las espigas de alto voltaje del EEG de reptiles en relación con el sueño y la epilepsia.

Centre: Departament de Biologia Fonamental i Ciències de la Salut. Edifici Guillem Colom Casanovas.

Investigador principal: RIAL PLANAS, Rubén Víctor.

Categoria: CU (àrea de coneixement: Fisiologia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Rial Planas, Rubén Víctor	CU	32
Nicolau Llobera, Cristina	TEU	32
Alemany Mandilego, Gaspar		16
Vich Botta, Joan		16
Gamundí Gamundí, Antoni	B	10
Cañellas Dols, Francesca		

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,85.

Summary

Keywords: sleep evolution, sleep function, epileptogenic mechanisms, EEG, reptiles.

Study objective: To determinate the reasons of the mammalian sleep analyzing the functional meaning of the high voltage spikes recorded in the reptilian EEG.

Design: four dependent variables and four independent ones taken in pairs (only one dependent and one independent for each analysis).

Subjects: Reptiles (saurians) of the species *Gallotia galloti* and *Iguana iguana*.

Interventions: EEG and sensory evoked potentials recording, studied with temporal series analysis (Fast Fourier Transformation, FFT).

Measurements: The dependent variables will be morphology, frequency and spectral composition of the reptilian EEG spikes compared with sensory evoked potentials. The independent variables will be the vigilance state, the body temperature, the sensory stimulation, the functional status of the nervous system (normal or with experimentally induced epilepsy) and the effect of drugs upon vigilance and epilepsy.

Projecte núm.: PM97-0094 (DGES). Programa sectorial de promoció general del coneixement

Títol: Regulación por nutrientes de la termogénesis y genes relacionados con la obesidad.

Codis UNESCO: 230221.

Centre: Departament de Biologia Fonamental i Ciències de la Salut. Edifici Guillem Colom Casanovas.

Investigador principal: PALOU OLIVER, Andreu.

Categoria: CU (àrea de coneixement: Bioquímica i Biologia Molecular).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Palou Oliver, Andreu	CU	32
Bonet Piña, M. Lluïsa	TEU	32
García Palmer, Fco José	TU	32
Gianotti Bauzà, Magdalena	CEU	32
Picó Segura, Catalina	TEU	32
Pons Biescas, Antoni	TU	32
Roca Salom, Pilar	TU	32
Serra Vich, Francesca	CEU	32
Lladó Sampol, Isabel	TEU	32
Proenza Arenas, Ana Maria	Aj. U	32
Oliver Oliver, Jordi	Aj. U	32
Balaguer Covas, Jaume	As.	16
Pablo Cànaves, Josep Agustí	As.	16
Matamoros Florí, Núria	As.	16
Quevedo Coli, Santiago	As.	16
Vilimelis Montsó, Josefina	As.	16
Crespí Rotger, Sebastià		16
Crespí Bestard, Catalina		16
Oliver Vara, Paula	B	40
Ribot Riutort, Joan	B	40

Nombre total d'investigadors de la UIB: 18.

Total EJC/setmana: 12,8.

Summary

Keywords: obesity, thermogenesis, cell differentiation, adipocytes, brown and white adipose tissue, UCP, uncoupling proteins.

This project comes from our accumulated experience in the subject of facultative thermogenesis, both at the molecular and the cellular levels. We are intending to obtain new insights into the obesity-related genes, focusing on adipocytes and thermogenesis and their physiological significance in relationship with obesity and its metabolic complications. Our current goal is to delineate the properties of some essential nutrients and related products as potential regulators of the thermogenic activity and cell proliferation/differentiation, particularly of brown and white adipocytes. For such studies, the pre-selected nutrients include: essential fatty acids (linoleic acid, arachidonic acid), retionic acid (all-trans and 9-cis) and several carotenoids related to vitamin A, butyric and

hydroxybutyric acid, vitamin D3 and the amino acids tryptophan and arginine. The action of these compounds is to be studied both in systems *in vitro* (isolated adipocytes, adipocyte primary cultures, immortal adipocyte cell lines) and *in vivo* in rodents, including animals with dietary-induced obesity and nutritional deficiencies. The parameters to be determined include: thermogenesis (heat production, UCPs levels, GDP-binding), cell proliferation (protein and DNA content, cellularity, DNA synthesis) and cell differentiation (morphology and levels of molecular markers of the brown and white adipocyte differentiated phenotype, such as triglycerides, LPL, C/EBP α , ap2, pRB, β 3 adrenergic receptors, leptin and its receptors, TNF α and others). Besides, and through collaborations with other research groups, the polymorphism of genes potentially involved in body weight control in relationship with obesity and its clinical complications will be studied in human populations.

Projecte núm.: FIS98-0007-01. Fons d'Investigació Sanitària.

Títol: Estudio de los hábitos alimentarios y parámetros nutricionales de la población balear.

Centre: Departament de Biologia Fonamental i Ciències de la Salut. Edifici Guillem Colom Casanovas.

Investigador principal: TUR MARÍ, Josep Antoni.

Categoria: TU (àrea de coneixement: Fisiologia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Tur Marí, Josep Antoni	TU	32
Prieto Almirall, Rafael María	TEU	32
Benito Oliver, Enrique	As.	12
Puig Mojer, Marta Sebastiana		12
Nicolás Orejas, Gabriela Noemí		12

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,9.

Summary

Keywords: alimentary habits, nutrients intake, Balearic Islands.

The aim of the present study is to know and quantify the pattern of food consumption of the population of the Balearic Islands, the differences between this pattern and that described in other spanish communities, and also to find a nutritional explanation to the high morbimortality levels of chronic diseases (cardiovascular and cancer diseases) described in the Balearic Islands. A transversal poblational study will be done in a representative sample of target population Mallorca by stratified random sampling, establishing three age groups. A quantitative food frequency questionnaire and 24 hours recall are going to be used, and then the nutrients intake of balearic population will be evaluated using a food composition table that includes traditional balearic food. This study will be completed by anthropometric measurements and plasma nutrient levels. This study will be carried out in two stages (summer and winter) to avoid the seasonal influence.

DEPARTAMENT DE CIÈNCIES DE L'EDUCACIÓ

- **El maltrato e intimidación entre iguales “bullying” en el medio educativo.** ORTE SOCIAS, M. del Carme
- **Aplicació dels sistemes d'informació geogràfica a la construcció del mapa escolar digital de la Comunitat Autònoma de les Illes Balears.** MARCH CERDÀ, Martí Xavier
- **Posibilidades de integración del deficiente ligero en Mallorca y consecuencias educativas.** SUREDA GARCIA, Bernat
- **La problemática migratoria en los estudios de BUP y ESO. Las Islas Baleares de la emigración a la inmigración.** VALLESPER SOLER, Jordi
- **Anàlisi dels problemes de convivència i disciplina en els centres educatius de la Comunitat de les Illes Balears, en els nivells d'ESO.** RIGO CARRATALÀ, Eduard
- **Perspectives de les noves tecnologies a la formació permanent: disseny i implementació.** SALINAS IBÁÑEZ, Jesús
- **L'educació de les persones adultes en la legislació autonòmica comparada i en la normativa europea.** VALLESPER SOLER, Jordi
- **EDU-PUPITRE. Estrategias para el diseño y evaluación de un entorno virtual de formación.** GISBERT CERVERA, Mercè.
- **Educación ambiental y organización escolar (implicaciones de la educación ambiental en la organización de los centros docentes.** SUREDA NEGRE, Jaume

Projecte núm.: PB96-0192 (DGES). Programa sectorial de promoció general del coneixement.

Títol: El maltrato e intimidación entre iguales “bullying” en el medio educativo.

Codis UNESCO: 6114.

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Investigadora principal: ORTE SOCIAS, M. del Carme.

Categoria: TU (àrea de coneixement: Teoria i Història de l'Educació).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Orte Socias, M. del Carme	TU	21
March Cerdà, Martí Xavier	CU	16
Ballester Brague, Lluís	TU int.	16
Ferrà Coll, Patrícia	TEU	16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 1,7.

Summary

Keywords: bullying, mistreatment, intimidation, groups of equal.

The objective that we outline us in the present investigation is the analysis of the characteristics of the mistreatment and intimidation among equal, more known as “bullying”, their extension, and their consequences from an educational point of view. In fact, one of the most meaningful phenomena than they are being developing within the different means and educational spaces is the mistreatment among equal. In this sense is intended by a part to know the reality of the bullying within our educationa contexts, such as the scholastic context of functional households, the context of the juvenile leisure centers, etc, and on the other hands to accomplish a theoretical review on the state of the issue of such problematic. All this with the purpose last of power to establish, to design and to apply social and educational intervention strategies of the studied population and of the commissioned professionals of your education, that is to say, teachers, social educators, directing of center, scholastic psychologists, scholastic direction equipment, families, etc.

And finally, we intend to develop a permanent investigation line that permits to go knowing the characteristics and evolution of this pehenomenon, as well as the efficiency of the used intervention strategies, establishing indicatory of evaluation.

Projecte d'investigació en tecnologies de la informació i de les comunicacions, i en sistemes d'informació geogràfica aplicats a la planificació educativa (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: [Aplicació dels sistemes d'informació geogràfica a la construcció del mapa escolar digital de la Comunitat Autònoma de les Illes Balears.](#)

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Investigador principal: [MARCH CERDÀ, Martí Xavier.](#)

Categoria: CU (àrea de coneixement: Teoria i Història de l'Educació).

Membres de l'equip	Categoria	Dedicació (h/setm.)
March Cerdà, Martí Xavier	CU	20
Salvà Tomàs, Pere A.	CU	15
Seguí Pons, Joana Maria	TU	15
Binimelis Sebastián, Jaume	TEU int.	15
Ruiz Pérez, Maurici	As.	15
Llauger Rosselló, Joan Antoni		5
Montón Costero, José Antonio		5
Ramon Molinas, Jerònia	Tèc.	37,5

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 3.

Summary

The aim of this project is to develop a non-university Scholar Map of the Balearic Island Community using a Geographical Information Systems. The analysis will start with a study of supply and demand in education to create a GIS database. Then a mathematical model built over the GIS will be perform to detect territorial differences and to propose solutions. To guarantee the transference of results of the project to Government a GIS specific program will be created to be used by administrator and technicians like a Decision Support System oriented to planning education.

Projecte núm.: Projecte d'investigació en educació ambiental i organització escolar. Ministeri d'Educació i Ciència.

Títol: [Educación ambiental y organización escolar \(implicaciones de la educación ambiental en la organización de los centros docentes\).](#)

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Investigador principal: [SUREDA NEGRE, Jaume.](#)

Categoria: CU (àrea de coneixement: Didàctica i Organització Escolar).

Membres de l'equip	Categoria
Sureda Negre, Jaume	CU
Catalán Fernández, Albert	As.
Catany Escandell, Miquel	As.
Llabrés Bernat, Antònia	
Orquiñena Smith, Begoña	

Nombre total d'investigadors de la UIB: 3.

Projecte núm.: Programa CIDE. Ministeri d'Educació i Cultura.

Títol: Posibilidades de integración del deficiente ligero en Mallorca y consecuencias educativas.

Codis UNESCO: 6310.

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Investigador principal: SUREDA GARCIA, Bernat.

Categoria: CU (àrea de coneixement: Teoria i Història de la Educació).

Membres de l'equip	Categoria
Sureda Garcia, Bernat	CU
Martínez Juan, Joana	C
Vilar Pérez, María Luisa	C
Dols Company, Francesca	C

Nombre total d'investigadors de la UIB: 4.

Projecte núm.: Programa CIDE. Ministeri d'Educació i Cultura.

Títol: La problemática migratoria en los estudios de BUP y ESO. Las Islas Baleares de la emigración a la inmigración.

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Investigador principal: VALLESPER SOLER, Jordi.

Categoria: TU (àrea de coneixement: Teoria i Història de la Educació).

Membres de l'equip	Categoria
Vallespir Soler, Jordi	TU
Sureda Garcia, Bernat	CU
Serra Busquets, Sebastià	TU
Buades Crespí, Joan	C
Aguiló Tarrugí, Dolors	C
Gomila Benejam, Josep	C
Martín Montes, Dolors	C
Mayó Bennàssar, Pere	C
Pou Rigo, Antoni	C

Nombre total d'investigadors de la UIB: 6.

Projecte d'investigació en tecnologies de la informació i comunicacions, medi ambient, educació i foment (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: [Anàlisi dels problemes de convivència i disciplina en els centres educatius de la Comunitat de les Illes Balears, en els nivells d'ESO.](#)

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Codis UNESCO: 610204.

Investigador principal: [RIGO CARRATALÀ, Eduard.](#)

Categoria: CU (àrea de coneixement: Psicologia Evolutiva i de l'Educació).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Rigo Carratalà, Eduard	CU	10
Rodríguez Rodríguez, Rosa Isabel	TEU	10
Adame Obrador, Teresa	TEU	10
Sureda Garcia, Immaculada	TEU int.	10
Colom Bauzà, Joana	Aj. EU	10
De la Iglesia Mayol, Begoña	Aj. EU	10
Luca de Tena Bethencourt, M. del C.	As.	10
Casero Martínez, Antonio	As.	10
Bauzà Sampol, Antoni	As.	1/2
Rosselló Ramon, Rosa	As.	10
Rayó Ferrer, Miquel	As.	1/2

Nombre total d'investigadors de la UIB: 11.

Total EJC/setmana: 2,27.

Projecte d'investigació en tecnologies de la informació i comunicacions, medi ambient, educació i foment (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: [Perspectives de les noves tecnologies a la formació permanent: disseny i implementació.](#)

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Codis UNESCO: 5801.

Investigador principal: [SALINAS IBÁÑEZ, Jesús.](#)

Categoria: TU (àrea de coneixement: Didàctica i Organització Escolar).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Salinas Ibáñez, Jesús	TU	8
Pérez Garcias, Adolfinia	TEU	12
Morlà Garcias, M. Miquela	Aj. EU	12
Urbina Ramírez, Santos	Aj. EU	12
Salom Fuster, Marc	As.	8
Negre Bennàsar, Francesca	As.	8

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 1,5.

Projecte d'investigació en tecnologies de la informació i comunicacions, medi ambient, educació i foment (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: [L'educació de les persones adultes en la legislació autonòmica comparada i en la normativa europea.](#)

Centre: Departament de Ciències de l'Educació. Edifici Guillem Cifre de Colonya.

Codis UNESCO: 580201.

Investigador principal: [VALLESPER SOLER, Jordi.](#)

Categoria: TU (àrea de coneixement: Teoria i Història de l'Educació).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Vallespir Soler, Jordi	TU	10
Oliver Trobat, Miquel	As.	10
Quetgles Pons, Bartomeu	TU	10
Rincón Verdera, Juan Carlos	As.	10
Salvà Mut, Francesca	TU	10

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 1,25.

Projecte núm.: TEL98-0454-C02-02 (DGES). Programa nacional d'aplicacions i serveis telemàtics.

Títol: [EDU-PUPITRE. Estrategias para el diseño y evaluación de un entorno virtual de formación.](#)

Centre: Universitat Rovira i Virgili.

Investigadora principal: GISBERT CERVERA, Mercè.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Adell Segura, Jordi		32
Bellver Tolrà, Antoni Josep		16
Contijoch Sanahuja, Teresa		16
Gairin Sallan, Joaquín		16
González Soto, Ángel		16
Güell Ivern, Maria		16
Jiménez Jiménez, Bonifacio		16
Ponce Alifonso, Carmen		16
Poves Paredes, Javier		16
Salinas Ibáñez, Jesús	TU	16
Sanroma Lucia, Manuel		16
Pérez Garcias, Adolfina	TEU	16
Morlà Garcias, Maria	Aj. EU	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

DEPARTAMENT DE CIÈNCIES HISTÒRIQUES I TEORIA DE LES ARTS

- **Colonización humana en medios insulares. Interacción con el medio y adaptación cultural: el caso de la isla de Mallorca.** GUERRERO AYUSO, Víctor Manuel.
- **Estrabón. Geografía. Libro VIII. El Peloponeso.** TORRES ESBARRANC, Joan Josep
- **Corona, municipio y fiscalidad (Mallorca, 1330-1500).** CATEURA BENNÀSSER, Pau
- **Estudio científico-técnico del retablo en Mallorca. Siglos XVI-XVIII.** GAMBÚS SÁIZ, Mercè
- **El reinado de Felipe II en Mallorca.** JUAN VIDAL, Josep
- **El asociacionismo en las Islas Baleares y sus publicaciones periódicas 1887-1983.** SERRA BUSQUETS, Sebastià
- **Política municipal y servicios sociales. Análisis comparado de núcleos urbanos y rurales, 1850-1936.** MOLL BLANES, Isabel
- **La arquitectura del ocio. La incidencia del fenómeno turístico en la arquitectura y urbanismo de las Islas Baleares.** SEGUÍ AZNAR, Miquel
- **Vivir en Mallorca medieval: documentación iconográfica.** BARCELÓ CRESPI, Maria
- **Bases para una sistematización de las fuentes documentales y gráficas para el estudio de la historia de las artes plásticas y de la fotografía en Baleares entre 1890 y 1980.** CANTARELLAS CAMPS, Catalina
- **Intelectuales y cultura política en la Europa sur mediterránea (siglos XIX-XX).** CASASSAS YMBERT, Jordi

Projecte núm.: PB95-0490 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Colonización humana en medios insulares. Interacción con el medio y adaptación cultural: el caso de la isla de Mallorca.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigador principal: GUERRERO AYUSO, Víctor Manuel.

Categoria: TEU (àrea de coneixement: Prehistòria).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Guerrero Ayuso, Víctor Manuel	TEU	16
Aramburu-Zabala, Francisco Javier	As.	32
Calvo Trias, Manuel		10
Coll Conesa, Jaume		20
Costa Ribas, Benjamí		16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 1,2.

Summary

Keywords: Majorca, *myotragus*, protodomestication.

There are clear dates to assume that the first human colonizers arrived to Majorca around 8th millenium b.C, this data has been calculated by radiocarbonic method. Nevertheless, after 15 years we do not have new dates that let us know further details about the process and the impact that anthropological colonization had on a virgin island.

The aim of this project is to continue a research line, still little outlined, with the multidisciplinary archeological study in two different fields: 1) Territory macrospatial exploration; 2) Intensive research in two sites with an ocupacional sequence that let us know, in the statigraphic record, the cultural process that we want to study. Apart, we want to accomplish a classification of absolute data that let us exactly date that process without any doubt.

Projecte núm.: PB96-0195 (DGES). Promoció sectorial de promoció general del coneixement.

Títol: [Estrabón. Geografia. Libro VIII. El Peloponeso.](#)

Codis UNESCO: 570112.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigador principal: [TORRES ESBARRANC, Joan Josep.](#)

Categoria: TU (àrea de coneixement: Filologia Grega).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Torres Esbarranc, Joan Josep	TU	32

Nombre d'investigadors de la UIB: 1.

Total EJC/setmana: 0,8.

Summary

Keywords: peloponnesus, strabo.

Commentaries on the text, with my translation, of the book VIII of Strabo, referring to the Peloponnesus. In the paragraph G of this Report is presented a synopsis of the work. The researcher has been devoted to this field some years. He has published Thucydides. History of the Peloponnesian War, in four volumes, as will be detailed in the paragraph H.

Projecte núm.: PB96-0145 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Corona, municipio y fiscalidad \(Mallorca, 1330-1500\).](#)

Codis UNESCO: 5504.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigador principal: [CATEURA BENNÀSSER, Pau.](#)

Categoria: TU (àrea de coneixement: Història Medieval).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cateura Bennàsser, Pau	TU	24
Urgell Hernández, Ricard	As.	16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 1.

Summary

From 1300 permanent taxation began in the kingdom of Mallorca. Whether called *sisas* (shaving) or, later, *ajudes* (aid) indirect taxes became from the beginning the fundamental option in the municipalities' tax strategy. But indirect taxes proved maladapted to the challenge of the great Mediterranean upheavals of the mid-14th century. Public debt, instituted as an emergency solution, ended up devouring all the municipalities' resources.

Projecte núm.: PB96-0202 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Estudio científico-técnico del retablo en Mallorca. Siglos XVI-XVIII.

Codis UNESCO: 5506, 5502, 2301, 6203.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigadora principal: GAMBÚS SÁIZ, Mercè.

Categoria: TU (àrea de coneixement: Història de l'Art).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Gambús Sáiz, Mercè	TU	32
Genestar Julià, Catalina	TU	32
Palou Franco, Josefina	TU	32
Sastre Moll, Jaume	As.	16
Reig Morro, Antònia		16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 2,8.

Summary

Keywords: altarpiece, sculpture, painting, polychromy, restoration, conservation, pigment determination, binding media determination.

The aim of this present research project is to do a systematic study of altarpieces in Majorca, between XVIth and XVIIIth centuries is an approach done from interdisciplinary point of view. For this purpose we analyse some artistic aspects such as (stylistic evolution, archival localization, bibliographical and graphical sources). In the same way, identification of the material used for the construction of their paintings (stratigraphy of the pictorial layers, identification of their mineralogical components and nature of the binding media used) will be determined.

Projecte núm.: PB97-0152 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [El reinado de Felipe II en Mallorca.](#)

Codis UNESCO: 550404.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigador principal: [JUAN VIDAL, Josep.](#)

Categoria: CU (àrea de coneixement: Història Moderna).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Juan Vidal, Josep	CU	24
Deyà Bauzà, Miquel	As.	18
Vaquèr Bennàssar, Onofre	As.	18
Serra Barceló, Jaume		20

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,5.

Summary

Studying the reign of Philip II in Mallorca involves investigating in depth a series of fundamental topics in order to be able to understand fully the evolution of society and the way of life during that area. Amongst these topics we highlight the following:

1. The system of government and the types of ruling power of the time: the privileges of the kingdom, royal administration and that of the University and the institutional reforms which took place.
2. Economic activities: demographic evolution, the agrarian problem, manufacturing activities and business relations, as well as the complex web of taxes and finance.
3. Defence and protection of the realm in the face of moslem pirate attacks.
4. Violence and internal social conflict, with special emphasis on the outlaw problem.
5. The Church and religious feeling at that particular crossroads market by the conclusion of the Council of Trent.
6. Cultural life: the "Estudi General", "Lulismo", history and literature.

Projecte núm.: PB97-0138 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [El asociacionismo en las Islas Baleares y sus publicaciones periódicas 1887-1983.](#)

Codis UNESCO: 4500.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigador principal: [SERRA BUSQUETS, Sebastià.](#)

Categoria: TU (àrea de coneixement: Història Contemporània).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Serra Busquets, Sebastià	TU	16
Duran Pastor, Miquel	CU	32
Castro Valdomar, M. Jesús	TEU	32
Marimon Riutort, Antoni	Aj. EU	16
Buades Juan, Josep Maria	B	40

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 3,4.

Summary

Keywords: associationism, Balearic Islands, periodic publications.

With this project we pretend realize an exhaustive and informatic catalog of the associations that have developed their activities in Balearic Islands and their periodic publications, as soon as an analysis of their incidence in society and their ideologic contributions, from the adoption of the juncy 30th 1887 associations law until the promulgation of the Balearic Island Home Rule (1983).

Projecte núm.: PB98-0126 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Política municipal y servicios sociales. Análisis comparado de nucleos urbanos y rurales, 1850-1936.

Codis UNESCO: 630302.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigadora principal: MOLL BLANES, Isabel.

Categoria: TU (àrea de coneixement: Història Contemporània).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Moll Blanes, Isabel	TU	16
Fullana Puigserver, Pere	As.	16
Salas Vives, Pere	As.	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Summary

Keywords: social history, local politics, life conditions.

The aim of the project is the analysis of local politics (city and village) in terms of providing services to change the conditions of urban life (water-supply networks, sewerage systems, illumination of the streets, construction of hard pavements, removal of human waste, schools...). We want to test the creation of those social services before the rise of Welfare State, to link this policy to the growing of urban population, and to look for its ideological background. Finally we want to observe if there is any kind of relation between the growing exercise of civil rights and the increase of those services. We compare urban and rural settings in a context of agrarian development, in Mediterranean Europe.

Projecte núm.: PB98-0168 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: [La arquitectura del ocio. La incidencia del fenómeno turístico en la arquitectura y urbanismo de las Islas Baleares.](#)

Codis UNESCO: 550602.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigador principal: [SEGUÍ AZNAR, Miquel.](#)

Categoria: CU (àrea de coneixement: Història de l'Art).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Seguí Aznar, Miquel	CU	32

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,8.

Summary

Keywords: history, architecture, urbanism, tourism, legislation, balearic islands.

The main objective of this research project is the study of the effects of the touristic phenomenon in the architecture and urbanism of the Balearic Islands - Majorca, Minorca, Ibiza and Formentera- between 1900, date in which the majorcans begin to realize the economical value of the touristic exploitation of the islands, and 1983, date of the approval of the "Plan provincial de ordenación de Baleares" (Provincial urbanistic plan of the Balearic Islands). We pretend to study two things: 1. The hotel and residential buildings from a typological and stylistic point of view; 2. The proposals and carrying out of the new touristical sites, both in the context of the historical development of the local tourism, and taking into account the evolution of the architecture and urbanism as well as the local and welfare estate dispositions and norms which have regulated them.

Projecte núm.: PB98-0166 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: [Vivir en Mallorca medieval: documentación iconográfica.](#)

Codis UNESCO: 5503.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigadora principal: [BARCELÓ CRESPI, Maria.](#)

Categoria: TU (àrea de coneixement: Història Medieval).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Barceló Crespi, Maria	TU	16
Rosselló Bordoy, Guillem		16

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,4.

Summary

Keywords: majorca, medieval history, iconography, documentation, daily living, archaeology, cultural history.

The combination of different methods of investigation makes possible the intention of obtaining a documentary vision, archaeological and iconographic, of daily living in a concrete period of the history of Majorca (XIII-XVI centuries). That was a period of special importance, inasmuch as it meant the integration of the island in the Christian ambit (1229). It involved an evident cultural change. XIII and XIV centuries meant the full immersion in the european medieval culture, while the XV century. Although the social and economical problems linked to the period, was the prelude to the access to the new renacentist mentality.

Projecte núm.: PB98-0173 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Bases para una sistematización de las fuentes documentales y gráficas para el estudio de la historia de las artes plásticas y de la fotografía en Baleares entre 1890 y 1980.

Codis UNESCO: 550602.

Centre: Departament de Ciències Històriques i Teoria de les Arts. Edifici Ramon Llull.

Investigadora principal: CANTARELLAS CAMPS, Catalina.

Categoria: CU (àrea de coneixement: Història de l'Art).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cantarellas Camps, Catalina	CU	32
Mulet Gutiérrez, Maria José	TEU	32
Lladó Pol, Francesca	TEU int.	32
Falero Folgoso, Francisco José	TEU int.	32
Reus Morro, Jaume	Aj. EU	32

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 4.

Summary

Keywords: painting, sculpture, photography, art criticism.

This research project is devoted to solve two main questions. 1) To compile systematically, and at the same time, selectively all kinds of sources -bibliographics, documentaries and graphics- related to the working, theory and criticism of Plastic Arts and Photography made at Balearic Islands between 1890 and 1980. 2) The artistic products research begin by choosing the most representative episodes and also the worst known of them belonging to this period. Together to this we also accomplish the task of contextualize the different artistic languages used. Two significative examples are the Modern Style and the art of the 70's. In short, this research try to developed a historical-artistic point of view, nowadays non-existent, from the work on two areas, concerning, in one hand, to document and cataloguing, and in the other hand, to analyze artisitc products.

Projecte núm.: PB96-0387 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: [Intelectuales y cultura política en la Europa sur mediterránea \(siglos XIX-XX\)](#).

Codis UNESCO: 550402.

Centre: Universitat de Barcelona.

Investigador principal: [CASASSAS YMBERT, Jordi](#).

Categoria: CU.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Casassas Ymbert, Jordi		32
Serra Busquets, Sebastià	TU	16
Marimon Riutort, Antoni	Aj. EU	16
Muniesa Brito, Bernardo		30
Abelló Güell, Teresa		30
Santacana Torres, Carles		30
Pujadas Martí, Xavier		
Pich Mitjana, Josep		16
Ghanime Rodríguez, Alberto		25
Llorens Vila, Jordi		16
Costa Ruibal, Òscar		25

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,8.

Summary:

After some years beeing working on the relationship between intellectuals and power in the Catalanian power (c. XIX-XX), it seems necessary to culminate the investigation proces as the estructura for dooing other works and studys in the same way. The consolidation of the history studys in the cultural's dinamic it's a fact that couldn't be not forgotten. Next to the methodological's precitions, next to the delimitation on concepts and them, next to the incitation of the comparatives analyses, etc. must be consolidate the investigations ways and to beegan especifics investigations to supplay the emptiness that now we are capable to localize and mesure. Finally, the iniciatives of work about mant them are comming, it's the evidence of the recuperation of the mediterranean sense. Since the beginings of our investigation group we work in this direction, thinkings always in the mediterranean space, needing to extend ours studys over France and Italy.

DEPARTAMENT DE CIÈNCIES MATEMÀTIQUES I INFORMÀTICA

- **Desarrollo e implementación de métodos genéricos de soporte a la verificación, validación evaluación y configuración de bases de datos inteligentes para la supervisión de sistemas dinámicos en tiempo real, y definición de esquemas de diagnóstico evolutivos a través de procesos de aprendizaje.** FIOL ROIG, Gabriel
- **Sistemas distribuidos de tiempo real seguros: aplicación al control de invernaderos.** MIRÓ JULIÀ, Josep J. A.
- **Sistema cooperativo de diseño en 3D.** LUO, Yuhua
- **Modelos teóricos para la agregación y la inferencia y su implementación para el procesado de información borrosa.** MAYOR FORTEZA, Gaspar
- **Entorno de simulación para arquitectura cliente-servidor y modelización de su comportamiento.** HUGUET ROTGER, Llorenç
- **Los factores educativos, sanitarios e institucionales que condicionan el descenso de la mortalidad infantil (1860-1931).** BUJOSA HOMAR, Francesc
- **Transformación algebraica de estructuras: sistemas de nivel superior, transformación algebraica de hipergrafos y álgebras parciales, y aplicaciones.** ROSSELLÓ LLOMPART, Francesc A.
- **DREAMS: Demostrador de Red ATM Móvil con acceso SDMA.** FEMENIES NADAL, Guillem
- **Propuesta y análisis de las especificaciones de CORBA en tiempo real.** PUIGJANER TREPAT, Ramon
- **Un sistema de modelización, análisis y simulación del cuerpo humano.** PERALES LÓPEZ, Francisco José
- **Modelos para el análisis de imágenes: análisis del movimiento, imágenes en color y aplicaciones médicas.** COLL VICENS, Bartomeu
- **ARAMIS: Arquitectura de Xarxa ATM Multimèdia Inalàmbrica amb Accés SDMA.** FEMENIES NADAL, Guillem
- **Inspecció automàtica d'entorns submarins per mitjà d'una flota d'agents submergibles.** OLIVER CODINA, Gabriel

Projecte núm.: TAP96-1114-C03-02 (CICYT). Programa nacional de tecnologies avançades de la producció.

Títol: Desarrollo e implementación de métodos genéricos de soporte a la verificación, validación evaluación y configuración de bases de datos inteligentes para la supervisión de sistemas dinámicos en tiempo real, y definición de esquemas de diagnóstico evolutivos a través de procesos de aprendizaje.

Codis UNESCO: 120309, 120304, 120315.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: Fiol Roig, Gabriel.

Categoria: CEU (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Fiol Roig, Gabriel	CEU	16
Miró Julià, Margalida	Aj. EU	16
Aguiló Pons, Isabel Maria	TEU	16
Riera Madurell, Teresa	CU	16
Ferrer Gili, Mateu S.	B	40
Fuster Parra, M. Pilar	TEU	16

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 3.

Summary

Keywords: artificial intelligence, diagnosis systems, learning systems, real-time expert systems, intelligent data bases, verification, validation and evaluation of knowledge bases, intelligent control.

New methods and techniques allowing to evaluate the structural properties (verification), the user needs' fulfilment (validation) and the quality (evaluation) of an Intelligent Data Base for supervision of dynamic systems will be studied and developed. Moreover, a system to aid the expert user in defining such an intelligent Data Base for supervision together with new complex evolutionary diagnosis models based on learning techniques, will be studied.

Projecte núm.: TAP96-1090-C04-03 (CICYT). Programa nacional de tecnologies avançades de la producció.

Títol: [Sistemas distribuidos de tiempo real seguros: aplicación al control de invernaderos.](#)

Codis UNESCO: 330406, 330407.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: [MIRÓ JULIÀ, Josep J. A.](#)

Categoria: TU (àrea de coneixement: Arquitectura i Tecnologia de Computadors).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Miró Julià, Josep J. A.	TU	20
Proenza Arenas, Julián	TEU	16
Servera Rullan, Guillem	As.	16
Ferrer Gomila, Josep Lluís	TEU	16
Bernat Nicolau, Guillem	Aj. EU	16

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2,1.

Summary

Keywords: real time distributed systems, fault tolerant systems, genetics and adaptative control algorithms, real-time local area networks, greenhouse control, modeling and evaluation of computers, microcontrolles systems, soilless culture ground.

This project completes the work that was started on the previous projects TIC90-0815 and TAP93-0352 where a multilevel distributed systems for industrial control purposes is now under development. In this case, it will include the analysis, design and implementation of a Safety Real-Time Distributed System for greenhouse control. The implementation will be based on Intelligent Agents. In order to cover all the aspects of the project and to perform an advanced control, two additional groups are joined: Control and Agronomic Groups. The Control Group will investigate the desing and implementation of Model Based Predictive Controllers. The Agronomic Group will supply its expertise on models and greenhouse processes. We intend to control the system in both environmental conditions and biological variables.

To make possible the design, evaluation and implementation of the Safe Real-Time Distributed System, it will be necessary the design and implementation of prototypes with CAN and VAN networks. We will use fault tolerant controllers and evaluate the performance and dependability of the distributed model.

Projecte núm.: TEL96-0544 (CICYT). Programa nacional d'aplicacions i serveis telemàtics.

Títol: Sistema cooperativo de diseño en 3D.

Codis UNESCO: 1203, 3304.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigadora principal: LUO, Yuhua.

Categoria: AS. ESTR. (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Luo, Yuhua	CU	32
Perales López, Francisco José	TEU	16
Mir Torres, Arnau	TEU	16
Rocha Cardenas, Jairo	TEU	16
Galli, Ricardo Adolfo	TEU	16
Bibiloni Coll, Antoni	TEU	16
Mas Sansó, Ramon	TEU	16
Mascaró Portells, Miquel	TEU	16
Palmer Rodríguez, Pedro A.	TEU int.	16
Yáñez Aguado, Carlos	Aj. EU	16

Nombre total d'investigadors de la UIB: 10.

Total EJC/setmana: 4,4.

Summary

Keywords: cooperative work, virtual studio, virtual reality, multimedia interactive communication service.

The project is to integrate communication techniques and 3D virtual scene generation tools to be a system that can be used for 3D cooperative design work. The system will have two major functions. The first function is to support the cooperative use of the system for 3D design and the second is to support the multiple client distant access to the system.

The application of the system can be very wide such as in virtual studio, cooperative-CAD/CAM etc. The resulted system of the project will allow several users to design a 3D virtual environment (virtual studio), a complicated architecture (CAD-CAM) cooperatively from distance. They may add, modify, or delete objects, change environment remotely and interactively. Any change from any user will be visible to other distant users in the group. They may obtain a 3D virtual scene, an architecture design or their elements from remote locations just as if they are local. The system clients can access the system from multiple locations remotely and interactively.

Projecte núm.: TIC96-1393-C06-06 (CICYT). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: Modelos teóricos para la agregación y la inferencia y su implementación para el procesado de información borrosa.

Codis UNESCO: 120304.

Centre: Departament de Ciències de Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: MAYOR FORTEZA, Gaspar.

Categoria: CU (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Mayor Forteza, Gaspar	CU	16
Valverde Garcia, Llorenç	CU	16
Calvo Sánchez, Tomasa	TEU	16
Mas Grimalt, Margarida	TEU	32
Suñer Llabrés, Jaume	TEU	32
Canet Estelrich, Pere	TEU	16
Carbonell Hugueta, Marc	TU	16

Nombre total d'investigadors de la UIB: 7.

Total EJC/setmana: 3,6.

Summary

Keywords: fuzzy processor, fuzzy logic, fuzzy systems, aggregation, inference.

The starting point is a fuzzy systolic processor whose basic design has been made along the last two years. Concerning to capacity and speed, its performance, measured under simulation by VHDL, exceeds all the currently known. Consequently, the possibility of creating high complexity systems with real time constraints may be hoped with the use of that processor once built.

The purpose is not only the complete implementation of the fuzzy microprocessor, but the design and realisation of a full development system must be at the level of the performance of the processor. All the required theoretical studies will be made in view to ensure the general applicability of the systems. Mainly, we shall study aggregation and inference models in order to be implemented in the fuzzy processor.

Projecte núm.: TIC96-0513 (CICYT). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: Entorno de simulación para arquitectura cliente-servidor y modelización de su comportamiento.

Codis UNESCO: 120318.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: HUGUET ROTGER, Llorenç.

Categoria: CU (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Huguet Rotger, Llorenç	CU	16
Llamosí Casas, Albert	CU	16
Bernat Nicolau, Guillem J.	Aj. EU	16
Fontanet Nadal, Gabriel	TEU	16
Fuster Parra, M. Pilar	TEU	16
Juiz García, Carlos	As.	8
Mas Pichaco, Antònia	TEU	16
Puigjaner Trepà, Ramon	CU	16

Nombre total d'investigadors de la UIB: 8.

Total EJC/setmana: 3.

Summary

Applications developed by large European companies are becoming more complex and the complexity is increasing with new architecture such as Client-Server or Parallel system. Moreover, databases and applications become distributed and integrate more complex and voluminous data (graphics, images, voices...). The development of distributed computing architecture comes from several reasons, on one hand:

- the development and execution of applications on workstations and PCs that provide significant price/performance gains,

- the end-users demands for local autonomy and additional functionality that increase user's productivity,

and on an other hand:

- the users need to access corporate data, increasing the need for everhigher level of integrity, performances and availability.

This new architecture is bringing about an important mutation of the information system world. New information system architecture needs new design methods and tools to ensure reliability of the applications.

Centralised systems are the main information system architecture working in the industrial enterprises. The migration of centralised application to client server architecture implies new structures for the enterprises information systems, in term of hardware, DBMS, network...More generally, the engineers experience and behaviours have to change. The main architectural questions in such a model are: 1) how and where in the model computing resources are distributed; 2) how to implement intercommunication facilities among all participating computing resources; 3) what will be the performances of the chosen architecture, and what will be the performances resulting from the decisions. The problems in developing complex applications are the architecture defintion and the performances aspects. These difficulties slow down the introduction of client-server architecture in industrial companies and deprive the enterprises of the client - server advantages (hardware and software decreasing cost, maintenance and explotación easier...).

The actual "lower CASE" propose addtional tools and methods to develop client-server applications, but the "upper CASE" for the applications design are not adapted to client-server architectures.

Projecte núm.: PB96-0206 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Los factores educativos, sanitarios e institucionales que condicionan el descenso de la mortalidad infantil (1860-1931).

Codis UNESCO: 520404.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: BUJOSA HOMAR, Francesc.

Categoria: CU (àrea de coneixement: Història de la Ciència).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bujosa Homar, Francesc	CU	32
Sureda Garcia, Bernat	CU	16
Fernández Bennàssar, M. Carme	CEU	16
Moll Blanes, Isabel	TU	16
Marín Gelabert, Miquel		40

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 2.

Summary

Keywords: demographic transition, health transition, infant and child mortality, education, Mallorca 19th-20 centuries.

The analysis of Demographic Transition in Spain shows differences in demographic behavior among the Spanish provinces. The Balearic Islands is one of the provinces where the transition seems to be quite early, specially concerned with the decline of infant mortality. The aim of the project is to follow a way of research in order to establish the causes of this decline. Diffusion of medical innovation is one of the factors to be analyzed. Thereafter we are going to consider health conditions, medical knowledge, and education as the most significant features of that historical process. To undertake the project we shall first establish when and how appear medical innovations in the field of hygiene and health, and when and how appear new education institutions (privates and publics). Secondly, we are going to analyze specific infant mortality rates in relation to medical and education institutions. We consider a sample of urban and rural population of Majorca from 1860 to 1931.

Projecte núm.: PB96-0191-C02-01 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Transformación algebraica de estructuras: sistemas de nivel superior, transformación algebraica de hipergrafos y álgebras parciales, y aplicaciones.

Codis UNESCO: 120324.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: ROSSELLÓ LLOMPART, Francesc A.

Categoria: CEU (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Rosselló Llompart, Francesc A.	CEU	32
Montserrat Antich, Miquel	TU	32
Torrens Sastre, Joan	CEU	32
Alberich Martí, Ricard	TEU	32
Llabrés Segura, Mercè	Aj. EU	32

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 4.

Summary

Keywords: algebraic transformation, HLR systems, hypergraph rewriting, partial algebras.

This project is aimed at contributing to the study and application of algebraic transformation (at different levels of abstraction) in the following aspects:

i) Determining missing HLR conditions for High-Level Replacement Systems, and studying High-Level Replacement Systems in the single-pushout approach.

ii) Completing on-going work about algebraic transformation of hypergraphs and arbitrary partial algebras.

iii) Applying results obtained in the previous points to term rewriting, object-oriented specification, and specification of hypertext systems.

iv) Implementing the new approaches to hypergraph transformation in appropriate software tools.

Projecte núm.: TIC98-0263. Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: [DREAMS: Demostrador de Red ATM Móvil con acceso SDMA.](#)

Codis UNESCO: 332505.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: [FEMENIES NADAL, Guillem.](#)

Categoria: TU (àrea de coneixement: Enginyeria Telemàtica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Femenies Nadal, Guillem	TU	32
Huguet Rotger, Llorenç	CU	16
Ferrer Gomila, Josep Lluís	TEU	16
Furió Caldentey, Ignasi	TEU	32
Carrasco Martorell, Loren	As.	16
Mut Puigserver, Macià	As.	16

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 3,2.

Summary

Keywords: WATM, WMAC, WDLC, SDMA, intelligent antennas, security.

The primary goal of the DREAMS project is to specify and implement a WATM network demonstrator that will provide QoS support for mobile multimedia services, such as e. g. video conferencing, video on demand, etc. The protocol stack of the proposed WATM network will be fully harmonized with that of the standard ATM. The basic idea consists on the integration of physical (PHY) (based on the use of adptive antenna arrays), media access control (MAC) (based on SDMA), data link control (DLC) and network control sublayers, specific on radio link, in the ATM protocol stack. Mobile terminal migration related functions, such as e. g. handover control and location management, and security management related functions will be handled through mobility/security support extensions in the control and signalling ATM protocols, implemented at the base station and wired network switching systems. Because the project deals with a new technology, the original system specification might have to be modified even during the final implementation phases. Therefore, the demonstrator platform will be designed to be as flexible as possible. The DREAMS demonstrator will contain sis subsystems, namely two mobile terminals (TM), two base stations (EB), ATM switch and control station. This architecture allows for the implementation of two radio cells and, therefore, allows for the evaluation of handover protocols. The radio links and, thus, the integration of physical (PHY), media access control (MAC), data link control (DLC) and network control sublayers with the ATM protocol stack, will be simulated using standard DSP (Digital Signal Processor) boards controlled by using either PCs or a workstation.

Projecte núm.: TIC98-0483-C03-01. Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: [Propuesta y análisis de las especificaciones de CORBA en tiempo real.](#)

Codis UNESCO: 330408.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: [PUIGJANER TREPAT, Ramon.](#)

Categoria: CU (àrea de coneixement: Arquitectura i Tecnologia de Computadors).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Puigjaner Trepas, Ramon	CU	16
Serra Cifre, Bartomeu Jaume	CU	16
Galmés Obrador, Sebastià	TEU	16
Santamaría Pérez, María Luisa	TEU	16
Garcias Salom, Miquel Àngel	As.	16
Juíz García, Carlos	As.	16
Mañas Florit, Josep	As.	16
Servera Rullan, Guillem	As.	16

Nombre total d'investigadors de la UIB: 7.

Total EJC/setmana: 2,8.

Summary

Keywords: performance modelling, simulation, queueing networks, petri nets, fault tolerance, distributed systems, object orientation, client-server systems.

Distributed systems habitually work in real-time environments mainly soft and sometimes hard. A real time environment has associated characteristics affecting performance as well as fault tolerance. CORBA (Common Object Request Broker Architecture) is the standar proposed by the *Object Management Group* (association in which there is software houses, integrators and users) in order to have a common framework to ease the development of object-oriented client-server systems. However, this standard does not have any help for the designer of object-oriented client-server soft real-time systems (those that most frequently appear in applications). Real-time characteristics include performance and dependability aspects. The goal of this project is to develop a proposal to enhance the CORBA standard with the definition of the quality of service required by the user and with the aspects to be covered to ease the task of the client-server system designers. So, it will be necessary to analyse performance characteristics by means of queuing networks or Petri nets as well as the algorithms to be included in CORBA to manage the tasks of admission control, traffic shapping and policing congestion control. In the dependability domain, it will be necessary to study the dependability and, so the software system reliability maintainability and avalability by means of Markov chains and Petri nets. For these analyses and the later algorithms implementation it is very important to have tools allowing shortering computation times. Also, for running these systems it is needed physical elements with an appropriate level of fault tolerance; so it will be necessary to develop techniques allowing the design and the enhancement the fault tolerance aspects of such systems.

Projecte núm.: TIC98-0302-C02-01. Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: [Un sistema de modelización, análisis y simulación del cuerpo humano.](#)

Codis UNESCO: 3304.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: [PERALES LÓPEZ, Francisco José.](#)

Categoria: TEU (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Perales López, Francisco José	TEU	16
Oliver Codina, Gabriel	TEU	16
Rocha Cárdenas, Jairo	TEU	16
González Hidalgo, Manuel	TEU	16
Mas Pichaco, Antònia	TEU	16
Fontanet Nadal, Gabriel	TEU	16
Mascaró Oliver, Miquel	TEU	16
Ortíz Rodríguez, Alberto	TEU	16
Palmer Rodríguez, Pedro A.	TEU int.	16
Mascaró Portells, Miquel	TEU int.	16
Yañiz Aguado, Carlos	Aj. EU	32
Clar Matheu, Albert	Tèc.	16
Bibiloni Coll, Antoni	TEU	16

Nombre total d'investigadors de la UIB: 13.

Total EJC/setmana: 4,8.

Summary

Keywords: digital image processing, human motion, computer animation articulated systems, 3D-matching, stereoscopy, biomechanics, 3D-tracking.

The project goal is the design of a system that allows modelling, analysis and simulation of human movement by using new techniques that functionally combine digital image processing over image processing sequences, with articulate structure modeling mechanisms, on a computer. This project attempts to be the basis for a modular system where the current and future main techniques can be geared in a common environment to carry out analysis and synthesis. Current analysis for subjects on some domains of application (sportive performance, choreographic or medical analysis, etc) show the need of complementary mechanisms. Manual methods used nowadays are subjective and its reliability depends on the operator. Semi-automatic methods based on optical markers whose information is later processed as stereoscopic images carry additional problems: markers occluded by mobile body parts, and the need to establish a matching between the surface where the markers are, and the articulation whose movement is analysed. In addition, they constrain the application range of the system by interfering with the subject to be evaluated. We proposed for this project the use of a biomechanic model built on a hierarchical and articulated structure. Correlation between each of the structural elements of the model is established with the analytical features of the stereoscopic images obtained

from time synchronised cameras. To allow a wide range of application, subjects are not required to carry optical markers or special clothing, although usual constraints are imposed to the background (static or uniform, constant illumination, etc).

By using several algorithms and techniques for digital processing of image sequences at different scales, we will get a set of analytical objects (points, segments in movement) that combined with the biomechanic constrains will allow us to track, identify and match the parts of the synthetic model with the body poses on the different views.

From the synthetic point of view, the system will allow generation of scenes that have not been previously filmed. This comprises modeling and animation of several parts of the human body, including deformable models and simulation of mechanical systems applied to human body.

The graphical environment description and the programming methodology are defined in such a way that it is possible to interactively generate by high level commands, a sequence of movements either real or synthetic. Besides that, the routines and libraries delivered will be portable and reusable according to an object oriented programming methodology. Thus there is a subsection on development of reusable software using the appropriate tools, at both methodological and implementation levels. Finally, in coordination with the Robotic Group in our departament and with others projects, it is possible to use these results on industrial environments applications with robots and people in movement to guarantee the safe interaction among them.

Projecte núm.: TIC99-0266 (CICYT). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: Modelos para el análisis de imágenes: análisis del movimiento, imágenes en color y aplicaciones médicas.

Codis UNESCO: 120304.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: COLL VICENS, Bartomeu.

Categoria: TU (àrea de conixement: Matemàtica Aplicada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Coll Vicens, Bartomeu	TU	32
Ballester Nicolau, Coloma	TEU	16
Caselles Costa, Vicent	TU	16
Prohens Sastre, Rafel	Aj. U	32
Sbert Juan, Catalina	TEU	32

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 3,2.

Summary

Keywords: informing processing, images, vision, algorithms, movement, compression, medical applications.

The aims of these project are:

- 1) From the description of the image given by the topographic map and the junctions in T, we try to extend this concept to the image movement, and, on the other hand, to define the topographic map of colour image. The applications will be given to follow the objects in a sequence of images, and, in the colour images, to give a compression model of the image from the structure of the topographic map.
- 2) The reconstruction 3D of the objects of a scene from two or more images taken on the scene. The model we suggest is based on the idea of evolution of curves of surfaces, the active contours. The medical application we pretend is the 3D reconstruction of the veins and blood vessels from two angiographies images.
- 3) To developp the corresponding software of these projects and integrate it in a software platform with a friendly user interface which allows a more generalized use of it.

Projecte d'investigació en tecnologies de la informació i de les comunicacions, i en sistemes d'informació geogràfica aplicats a la planificació educativa (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: ARAMIS: Arquitectura de Xarxa ATM Multimèdia Inalàmbrica amb Accés SDMA.

Codis UNESCO: 332599.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: FEMENIES NADAL, Guillem.

Categoria: TU (àrea de coneixement: Enginyeria Telemàtica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Femenies Nadal, Guillem	TU	20
Huguet Rotger, Llorenç	CU	8
Ferrer Gomila, Josep Lluís	TEU int.	10
Furió Caldentey, Ignasi	TEU int.	16
Carrasco Martorell, Loren	As.	8
Mut Puigserver, Macià	As.	8

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 1,8.

Summary

Keywords: WATM, WMAC, WDLC, multimedia, SDMA, intelligent antennas.

The primary goal of the ARAMIS project is to specify and implement a WATM network demonstrator that will provide QoS support for mobile multimedia services, such as e.g. video conferencing, video on demand, etc. The protocol stack of the proposed WATM network will be fully harmonized with that of the standard ATM. The basic idea consist on the integration of physical (PHY) (based on the use of adaptative antenna arrays), medi access control (MAC) (based on SDMA) data link control (DLC) and network control sublayers, specific on radio link, in the ATM protocol stack. Mobile terminal migration related functions, such as e.g. handover control and location management, and security management related functions will be handled through mobility/security support extensions in the control and signalling ATM protocols, implemented at the base station and wired network switching systems. Because the project deals with a new technology, the original system specification might have to be modified even during the final implementation phases. Therefore, the demonstrator platform will be designed to be as flexible as possible. The ARAMIS demonstrator will contain six subsystems, namely two mobile terminals (TM), two base stations (EB), ATM switch and control station. This architecture allows for the implementation of two radio cells and, therefore, allows for the evaluation of handover protocols. The radio links and, thus, the integration of physical (PHY), medi access control (MAC), data link control (DLC) and network control sublayers with the ATM protocol stack, will be simulated using standard DSP (Digital Signal Processor) boards controlled by using either PCs or a workstation.

Projecte d'investigació en tecnologies de la informació i de les comunicacions, i en sistemes d'informació geogràfica aplicats a la planificació educativa (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: [Inspecció automàtica d'entorns submarins per mitjà d'una flota d'agents submergibles.](#)

Codis UNESCO: 3304-06.

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: [OLIVER CODINA, Gabriel.](#)

Categoria: TEU (àrea de coneixement: Arquitectura i Tecnologia de Computadors).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Oliver Codina, Gabriel	TEU	20
Llamosí Casas, Albert	CU	20
Valverde Garcia, Llorenç	CU	20
Ortíz Rodríguez, Alberto	TEU	20
Bernat Nicolau, Guillem Joan	Aj. EU	20
Proenza Arenas, Julián	TEU	16

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 2,9.

Summary

The last steps forward in the field of electronics, computer science and mechanics have made it possible to introduce ever smaller and sensorially more powerful robots. In this project we consider the construction of a small autonomous underwater vehicle (AUV) as a starting point for what could become a fleet of AUV able to carry out either individual or coordinated tasks. The essential traits of the prototype submarine are as follows: high sensorial and computational capacity, strength, liability, small size and low cost. To that end, a great number of scientifically interesting questions will have to be solved: real time processes and requirements, concurrence, parallelism, object recognition and interpretation of underwater scenes, fault tolerance, control, and so on. With robots such as the one we propose, one will be able to solve any type of task that implies collecting underwater data in a fast, low-cost and risk-free manner. The inspection of telephone and electric cables, the elaboration of fauna and flora maps, pollution studies or the localization or archeological remains are just some outstanding examples which are now being solved in a less innovative and advantageous way. The social, economic and environmental influence that the sea exerts over the Balearic Islands highlights the interest of this project which will offer a finished and operative product as its outcome.

DEPARTAMENT DE CIÈNCIES DE LA TERRA

- **Rururbanización, ordenamiento urbanístico y propiedad extranjera en Mallorca y Pitiusas.** SALVÀ TOMÀS, Pere A.
- **Detección del cambio climático en el archipiélago balear a partir de información instrumental y referencias históricas.** GRIMALT GELABERT, Miquel
- **Análisis comparativo entre las unidades básicas de acreción en depósitos carbonatados del cretácico, paleógeno, mioceno y plioceno; arquitectura de facies en función de cambios, producción, sedimento, acomodación.** POMAR GOMÀ, Lluís
- **El karst y la morfogénesis litoral en las Islas Baleares y la costa valenciana: su relación con las oscilaciones del nivel marino a lo largo del Cuaternario.** FORNÓS ASTÓ, Joan Josep
- **Estudio del hidrograma de avenida y la erosión del lecho de los cauces de cuencas instrumentadas mediterráneas.** MARTÍN VIDE, Juan Pedro
- **Evaluación de recursos hídricos y transporte sólido en cuencas forestales mediterráneas con distintos usos del suelo: aproximación regional y experimental.** SALA SANJAUME, Maria.

Projecte núm.: PS95-0104 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Rururbanización, ordenamiento urbanístico y propiedad extranjera en Mallorca y Pitiusas.

Codis UNESCO: 540402.

Centre: Departament de Ciències de la Terra. Edifici Guillem Colom Casasnovas.

Investigador principal: SALVÀ TOMÀS, Pere A.

Categoria: CU (àrea de coneixement: Geografia Humana).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Salvà Tomàs, Pere A.	CU	32
Artigues Bonet, Antoni A.	TEU	32
Binimelis Sebastián, Jaume	Aj. U	32
Blázquez Salom, Macià	Aj. EU	16
Brunet Estarellas, Pere Joan	TU	16
Ginard Bujosa, Antoni	TEU	16
Ruiz Pérez, Maurici	Tèc.	20
Rullan Salamanca, Onofre	TU	16

Nombre total d'investigadors de la UIB: 8.

Total EJC/setmana: 4,5.

Summary

In the Balearic Islands mass tourism has been the main cause of a large series of changes in different aspects. In this way, the islands of the Balearic archipelago have been shaped as extended urban areas. During last decades the insular geographical spaces have developed an important counterurbanization process. This counterurbanization process will be our study scope from the point of view of the urban home implosion in rural spaces.

As in similar cases, in our study area will be identifiable a migration process front the cities to the countryside. But in the Balearic case this migration process and its particular indicator, the residence function in rural land, are consequence of two different demands: the native one and the foreign demand. In the Balearic Islands the projects for residence use in rural land are not due only to intern demand. The Balearic countryside is also the reserved space of a demand from the rest of the European urban areas. "Rurbanisation" and the counterurbanization are the two main phenomena that explain the conversion of the insular countryside as a new multifunctional space.

Projecte núm.: CLI97-0419 (CICYT). Programa nacional d'I+D sobre el clima.

Títol: *Detección del cambio climático en el archipiélago balear a partir de información instrumental y referencias históricas.*

Codis UNESCO: 2502.

Centre: Departament de Ciències de la Terra. Edifici Guillem Colom Casanovas.

Investigador principal: GRIMALT GELABERT, Miquel.

Categoria: TU (àrea de coneixement: Geografia Física).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Grimalt Gelabert, Miquel	TU	16
Laita Ruiz de Asua, M. Mercedes	AEU	16
Ruiz Pérez, Maurici	As.	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Summary

Keywords: climatic change, rainfall, temperature, Balearic Islands.

The main purpose of the project is to analyse the climate changes in the Balearic Islands. The study will be performed starting from the date of the first data systematically recorded to nowadays. It will be applied an statistical study to detect the scope of the climate change in a regional scale. The differences between islands will be specially considered. The data analysis proces will include an statistical approach and a recognition of geographical patterns. The results of this analysis will be considered indicators of the climatic changes.

Projecte núm.: PB97-0135-C02-01 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Análisis comparativo entre las unidades básicas de acreción en depósitos carbonatados del cretácico, paleógeno, mioceno y plioceno; arquitectura de facies en función de cambios, producción, sedimento, acomodación.

Codis UNESCO: 2506.

Centre: Departament de Ciències de la Terra. Edifici Guillem Colom Casanovas.

Investigador principal: POMAR GOMÀ, Lluís.

Categoria: CU (àrea de coneixement: Estratigrafia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Pomar Gomà, Lluís	CU	16
Mateos Ruiz, Rosa María	As.	16
Calvet Rovira, Francesc		16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,8.

Summary

Keywords: carbonates, platforms, shelves, facies architecture.

The aim of this project is to establish the relationships between carbonate production, accommodation changes and facies architecture in four examples of carbonate platforms and shelves from the Cretaceous and Paleogene of the southeastern-Pyrenees area, upper Miocene of Menorca (Balearic Islands) and Plio-Pleistocene of Puglia (southern Italy). Carbonate production in these examples was related to different types of biota, clima and geodynamic context.

Projecte núm.: PB98-0132 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: El karst y la morfogénesis litoral en las Islas Baleares y la costa valenciana: su relación con las oscilaciones del nivel marino a lo largo del Cuaternario.

Codis UNESCO: 250619.

Centre: Departament de Ciències de la Terra. Edifici Guillem Colom Casasnovas.

Investigador principal: FORNÓS ASTÓ, Joan Josep.

Categoria: TU (àrea de coneixement: Estratigrafia).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Fornós Astó, Joan Josep	TU	32
Rodríguez Perea, Antoni	TU	16
Ginés Gracia, Joaquín	As.	16
García García, Celso	TEU	16
Giménez García, Jorge	Aj. U	16
Servera Nicolau, Jaume	TEU	16
Gelabert Ferrer, Bernadí	As.	16
Rosselló Verger, Vicenç M.		24
Segura Beltran, Francesca S.		16
Pardo Pascual, José E.		16

Nombre total d'investigadors de la UIB: 7.

Total EJC/setmana: 3,2.

Summary

Keywords: speleochronology, geomorphology, sea-level oscillation, littoral karst, pleistocene, holocene.

Mallorca and Menorca are islands mainly integrated by limestone lithologies. They represent an adequate scenary for developing pluridisciplinary investigations focused on littoral geomorphology and, more particularly, on coastal karst morphogenesis. Several research programmes have been independently devoted in the past to topics such as the study of paleo sea-level related speleothems or the peculiar "cala" -type landscape, which is one of the most characteristic features along the coast of the Balearic Islands. Within this framework, it is of interest to carry out an integrated investigation of littoral morphogenetic processes controlled by pleistocenic and holocenic Mediterranean sea oscillations; this would contribute to a better understanding of both the recent sea-level history and the geomorphological evolution of associated phenomena. The main subjects to be approached in the proposed project are as follows:

- Speleo-diving techniques aimed at sampling of the phreatic speleothem alignments that record paleo sea-levels between +0 and -25 m below the current Mediterranean level.
- Isotope dating of the phreatic speleothem samples, in order to determine a eustatic curve that will provide data on negative sea-level stabilizations connected with cold climatic events.
- Correlation of the chronological data obtained on the geomorphological evolution of both littoral endokarst and fluvio-torrential systems which originate the "cala"-type coast and the infillings associated with them.
- Localization, measurement, and dating of eolianite sets and the study of their karstic evolution in Balearic and Valencian coasts.
- Comparison between coastal morphogenesis on the Balearic Islands and in carbonate littorals of eastern Iberia, and establishment of common and/or differential trends in the tectono-eustatic evolution of both areas.

This research project will be an adequate means of bringing out substantial information on a poorly known topic in the study of the Balearic Quaternary: the lower paleo sea-levels, the chronology of the events, and its implications on the littoral morphogenetics of the islands in question.

Projecte núm.: HID96-0971. Programa nacional de recursos hídrics.

Títol: Estudio del hidrograma de avenida y la erosión del lecho de los cauces de cuencas instrumentadas mediterráneas.

Centre: Universitat Politècnica de Catalunya.

Investigador principal: MARTÍN VIDE, Juan Pedro.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Martín Vide, Juan Pedro		32
Bateman Pinzón, Allen		16
Niñerola Chifoni, Daniel		16
García García, Celso	TEU int.	40
Polo Cantero, José		32
Sala Sanjaume, Maria		16

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 1.

Projecte núm.: HID97-0397. Programa nacional de recursos hídrics.

Títol: Evaluación de recursos hídricos y transporte sólido en cuencas forestales mediterráneas con distintos usos del suelo: aproximación regional y experimental.

Centre: Universitat de Barcelona.

Investigadora principal: SALA SANJAUME, Maria.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Sala Sanjaume, Maria		16
Batalla Villanueva, Ramon J.		16
Castellví Sentis, Francesc		16
García García, Celso	TEU int.	16
Poch Claret, Rosa M.		16
Ubeda Cartaña, Xavier		40

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,4.

DEPARTAMENT DE DRET PRIVAT

- **Estudio de la facultad de desistimiento en los contratos turísticos como forma de protección del consumidor.** COCA PAYERAS, Miquel
- **Aspectos jurídicos de la seguridad en el comercio electrónico; en particular, estudio de la firma electrónica y las autoridades de certificación.** MARTÍNEZ NADAL, Apol·lònia
- **Derecho concursal español. Situación actual y reforma.** ALCOVER GARAU, Guillem
- **Turisme i comerç electrònic: el compliment de la legislació turística espanyola i de la CAIB en servidors (webs) turístics.** CAVANILLAS MÚGICA, Santiago
- **La reforma de la justicia civil. Incidencia en los procesos de otros órdenes jurisdiccionales. Estudios preparatorios para su aplicación.** TAPIA FERNÁNDEZ, Isabel

Projecte núm.: PS95-0060 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Estudio de la facultad de desistimiento en los contratos turísticos como forma de protección del consumidor.

Codis UNESCO: 560502.

Centre: Departament de Dret Privat . Edifici Anselm Turmeda.

Investigador principal: COCA PAYERAS, Miquel.

Categoria: CU (àrea de coneixement: Dret Civil).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Coca Payeras, Miquel	CU	16
Vila Ribas, Maria del Carme	TU	16
Ferrer Vanrell, M. Pilar	TU	16
Munar Bernat, Pedro A.	TU	16
Martínez Nadal, Apol·lònia	TU	16

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2.

Summary

Keywords: tourism, contracts, protection consumers.

One of the most important aspects of touristic contracts is the recognise of a waiver possibility to the tourists as consumers.

This project has the objective of studying this possibility of waiver, its juridic characters, and the paper it plays in the different cases of inefficiency of the contracts.

In order to get this objective, it will be study the normative, spanish and also the European Community one, which protects the tourist as consumer, and the recognise by this normative of this possibility of waiver.

Projecte núm.: PB98-0169 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Aspectos jurídicos de la seguridad en el comercio electrónico; en particular, estudio de la firma electrónica y las autoridades de certificación.

Codis UNESCO: 5699.

Centre: Departament de Dret Privat. Edifici Anslem Turmeda.

Investigadora principal: MARTÍNEZ NADAL, Apol·lònia.

Categoria: TU (àrea de coneixement: Dret Mercantil).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Martínez Nadal, Apol·lònia	TU	16
Alcover Garau, Guillem	CU	16
Huguet Rotger, Llorenç	CU	16
Ferrer Gomila, Josep Lluís	TEU	16
Blas Guasp, Javier	As.	16

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2.

Summary

Keywords: electronic commerce, electronic signature, certification authorities, certificates.

Study of security in electronic commerce because of the problems of authentication, integrity, confidentiality and repudation in electronic communications developed through open and insecure channels. Electronic signature in general, and digital signature in particular, as instrument of security. Necessity of certificates and certification authorities as complement of electronic signature in order to obtain a secure electronic commerce; objective aspects: the cycle of life of certificates; subjective aspects: certification entity, subscriber and relying party. Study of juridic and technical aspects about these new concepts.

Projecte núm.: PB97-0139-C02-01 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Derecho concursal español. Situación actual y reforma.](#)

Codis UNESCO: 5605.

Centre: Departament de Dret Privat. Edifici Anselm Turmeda.

Investigador principal: [ALCOVER GARAU, Guillem.](#)

Categoria: CU (àrea de coneixement: Dret Mercantil).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Alcover Garau, Guillem	CU	16
Alonso Espinosa, Francisco		16
Martínez Nadal, Apol·lònia	TU	16
Oliver Barceló, Santiago	As.	16
Farias Batlle, Mercedes		16
Sánchez Ruiz, Mercedes		16
Grimaldos García, Isabel		32
Martínez Cañellas, Anselm M.	Aj. EU	32

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 2.

Projecte núm.: PB98-1468-C02-02 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: [La reforma de la justicia civil. Incidencia en los procesos de otros órdenes jurisdiccionales. Estudios preparatorios para su aplicación.](#)

Codis UNESCO: 520402.

Centre: Departament de Dret Privat. Edifici Anselm Turmeda.

Investigadora principal: [TAPIA FERNÁNDEZ, Isabel.](#)

Categoria: CU (àrea de coneixement: Dret Processal).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Tapia Fernández, Isabel	CU	32
López Simó, Francisco	TU	16
Nadal Gómez, Irene	Aj. EU	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,6.

Projecte d'investigació en tecnologies de la informació i comunicacions, medi ambient, educació i foment (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: Turisme i comerç electrònic: el compliment de la legislació turística espanyola i de la CAIB en servidors (webs) turístics.

Centre: Departament de Dret Privat. Edifici Anselm Turmeda.

Codis UNESCO: 560206.

Investigador principal: CAVANILLAS MÚGICA, Santiago.

Categoria: CU (àrea de coneixement: Dret Civil).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cavanillas Múgica, Santiago	CU	16
Tur Faúndez, M. Nélida	TU	16
Paniza Fullana, Antònia	Aj. EU	16
Garcia Canals, Núria		20
Payeras Capellà, M. Magdalena		16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Summary

The objectives of the project are:

- 1- Identification of duties caused by the sectorial legislation about tourism, which have to be complied by the touristic webs.
- 2- Proposition of legal and technical measures with which fulfilment of this duties turns out easier.
- 3- Elaboration of a practical solutions guide.

DEPARTAMENT DE DRET PÚBLIC

- **Propiedad intelectual, propiedad industrial y nuevas tecnologías en el ámbito jurídico penal.**
QUINTERO OLIVARES, Gonzalo
- **Los retos de la Unión Europea ante la ampliación hacia la Europa central y oriental.**
FERNÁNDEZ TOMÁS, Antonio.

Projecte núm.: PB98-0165-C02-01 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Propiedad intelectual, propiedad industrial y nuevas tecnologías en el ámbito jurídico penal.

Codis UNESCO: 5699.

Centre: Departament de Dret Públic. Edifici Anslem Turmeda.

Investigadora principal: QUINTERO OLIVARES, Gonzalo.

Categoria: CU (àrea de coneixement: Dret Penal).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Quintero Olivares, Gonzalo	CU	32
Garcia Solé, Marc		32

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,8.

Summary

Keywords: intellectual property, industrial property, new technologies, penal project leader.

Our research project is aimed at studying the limits to the criminal and civil action upon the intellectual and industrial property rights exploited by telematic means and specially over the Internet. In order to do so, we need first to focus on the means through which this exploitation is conducted, which presents in itself several juridical problems due to a generalized *anomia* and the usage developed by web-operators. This study also includes the structure of the service providers as well as their responsibility regime. Once this first step is concluded, we will study the different domestic laws on the protection of industrial and intellectual property as well as on the protection of data and intimacy. Afterwards, we will focus on the several infringing conducts developed and the civil and criminal responsibility regimes applicable to them.

Projecte núm.: PB97-0428 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Los retos de la Unión Europea ante la ampliación hacia la Europa central y oriental.

Centre: Universitat de Castilla-La Mancha.

Investigador principal: FERNÁNDEZ TOMÁS, Antonio.

Categoria: CU.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Fernández Tomás, Antonio		16
Huesa Vinaixa, Rosario	CU	16
Pérez Castelló, Josep Antoni	TU	
Sánchez Legido, Ángel		16
Forcada Barona, Ignacio		16
Ortega Terol, J. Miguel		16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,4.

Summary

Political and juridical analysis on the implications of the European Union expanding trends towards Central and Eastern Europe on the institutional framework of the Communities and on the progress and evolution of the integration process. These implications might consist of the strengthening of the assumptions of "two speeds Europe" or even Europe "à la carte". A federal model of european integration would became, therefore, a non realistic approach from the ponint of view of the political and juridical construction of the European nation.

DEPARTAMENT D'ECONOMIA I EMPRESA

- **Estimación de la demanda de un espacio natural a partir de los atributos que lo integran. Especial referencia a los espacios rivales con atractivo turístico.** AGUILÓ PÉREZ, Eugeni
- **El gobierno de la empresa. Implicaciones para la competitividad de la empresa española.** LOZANO ARNICA, Gonzalo
- **La estimación del valor económico de los atributos ambientales a partir del mercado inmobiliario para la correcta definición de indicadores de sostenibilidad de una área turística.** AGUILÓ PÉREZ, Eugeni
- **Diseño de un instrumento para la asignación de presupuestos de farmacia a los equipos de atención primaria del territorio gestionado por INSALUD.** FUSTER CULEBRAS, Julio
- **Análisis económico y política pública: Fundamentos, diseños y evaluación.** LÓPEZ GARCÍA, Miguel Angel

Projecte núm.: AMB96-0550 (CICYT). Programa nacional d'I+D en medi ambient.

Títol: Estimación de la demanda de un espacio natural a partir de los atributos que lo integran. Especial referencia a los espacios rivales con atractivo turístico.

Codis UNESCO: 530719.

Centre: Departament d'Economia i Empresa. Edifici Mateu Orfila i Rotger.

Investigador principal: AGUILÓ PÉREZ, Eugeni.

Categoria: CU (àrea de coneixement: Economia Aplicada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Aguiló Pérez, Eugeni	CU	32
Juaneda Sampol, Catalina N.	CU	16
Sastre Albertí, Francesc	TU	16
Riera Font, Antoni	TU	32
Tirado Bennàsar, M. Dolors	TEU	32
Rosselló Nadal, Jaume	B	

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 3,2.

Summary

Keywords: travel cost, quality of the attributes, substitute sites.

By accepting the fact that the value assigned to the recreational services, included in a natural site, depends on the attributes it has, we can state that frequenting one area and not another depends on the quality of its attributes. In this sense, it is important to evaluate the demand for natural sites according to the quality and the substitution rate existing among various sites. By using the TRAVEL COST METHOD (considering its multiple aspects) in order to value natural sites we can make this extension: on the one hand we can estimate the demand function of natural site by introducing besides the access cost differential variables such as substitutive sites, the quality of the attributes they have and the socio-economic characteristics of the visitors; on the other hand, we are able to analyse the decision-making process which leads a tourist or a resident to frequent a natural site. Hence, in order to obtain information about the preferences of those who visit these natural sites, we will rely on surveys which will be distributed in different sites.

Projecte núm.: PB97-0185-C03-03. Programa sectorial de promoció general del coneixement.

Títol: [El gobierno de la empresa. Implicaciones para la competitividad de la empresa española.](#)

Centre: Departament d'Economia i Empresa. Edifici Mateu Orfila i Rotger.

Investigador principal: [LOZANO ARNICA, Gonzalo.](#)

Categoria: TU (àrea de coneixement: Economia Financera i Comptabilitat).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Lozano Arnica, Gonzalo	TU	32
Rivas Yarza, Pedro	TEU int.	32
Alemany Hormaeche, Margalida	TEU int.	32
Calveras Maristany, Aleix	TEU int.	32

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 3,2.

Summary

To identify the determinant of the competitiveness of the enterprises is a difficult task, besides other reasons because of the strong interrelations among them. The structure of ownership and the governance organisation, the role of the capital markets, the investment in intangible capital are aspects which have been insufficiently studied in the Spanish case. The proposed project has an objective the improvement of its knowledge. In that sense, it has a theoretical component to build a frame of reference -and an empirical one, to amass data and information following a more accurate diagnose.

Projecte núm.: SEC99-0267 (CICYT). Pla nacional d'estudis socials i econòmics.

Títol: La estimación del valor económico de los atributos ambientales a partir del mercado inmobiliario para la correcta definición de indicadores de sostenibilidad de una área turística.

Codis UNESCO: 5307.

Centre: Departament d'Economia i Empresa. Edifici Mateu Orfila i Rotger.

Investigador principal: AGUILÓ PÉREZ, Eugeni.

Categoria: CU (àrea de coneixement: Economia Aplicada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Aguiló Pérez, Eugeni	CU	32
Juaneda Sampol, Catalina N.	CU	16
Socias Salvà, Antoni	CU	16
Riera Font, Antoni	TU	32
Aguiló Segura, Paula Maria	TEU	32
Llull Gilet, Antoni	TEU	32

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 4.

Summary

Keywords: environmental valuation, hedonic prices, sustainable index.

The hedonic hypothesis tells us that goods are valued for their utility-bearing attributes or characteristics. From this hypothesis we can accept that the choice of a house depend on structural characteristics of the house, characteristics of the neighbourhood and the location-specific environmental amenities. Therefore, it would be correct to use metodologic instruments to the development of aspects of overall planning (territorial, urban and environmental) with the hedonic prices valuation technique. Then we will be able to value the significance of the environmental attributes, to specify the demand of these attributes to be able to value individual walfare changes when these environmental characteristics change and to rationalise the public policies and private strategies design with the help of sustainable index. To show the applicability of this methodology we will make a study of a tourist area of the Balearic Islands of residential tourism.

Projecte núm.: FIS99-0544. Fons d'Investigació Sanitària.

Títol: Diseño de un instrumento para la asignación de presupuestos de farmacia a los equipos de atención primaria del territorio gestionado por INSALUD.

Centre: Gerència d'Atenció Primària de Mallorca-Departament d'Economia i Empresa.

Investigador principal: FUSTER CULEBRAS, Julio.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Fuster Culebras, Julio		20
Pomar Reynés, Josep		12
Llobera Canaves, Joan		12
Pou Bordoy, Joan		15
Martín Martín, M. Vega		15
Clavero Gomila, Javier		12
Mesquida Mas, Mateu		12
Juaneda Sampol, Catalina N.	CU	12
Cladera Munar, Magdalena	Aj. EU	20

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,8.

Summary

The objective is to design a model intended to establish the optimum level of prospective financing of the pharmacy costs of each primary health care team, and rationally and equitably assign budgets on a per capita basis adjusted for unit of provision. On the basis of the information regarding the health care teams involved in the study, which is provided by the Subdirección General de Atención Primaria, predictive multivariate models will be built using multiple linear regression models. These models are expected to explain a fair amount of the variance of the pharmacy costs incurred, as well as to provide a prospective budgetary assignment system that takes into account the optimum level of pharmacy costs of each health care team.

Projecte núm.: PB98-0866 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Análisis económico y política pública: Fundamentos, diseños y evaluación.

Centre: Universitat Autònoma de Barcelona.

Investigador principal: LÓPEZ GARCÍA, Miguel Angel.

Membres de l'equip	Categoria	Dedicació (h/setm.)
López García, Miguel Angel		
Alavedra Castellví, Anna		
Alcántara Escolano, Vicente		
Bacaria Colom, Jordi		
Blanes Cristóbal, Vicente		
Busom Piquer, Isabel		
Cantó Sánchez, Olga		
López García, Salvador		
Mercader Prats, Magdalena		
Ramos Morilla, Xavier		
Roca Sagales, Oriol		
Serrano Mancilla, Alfredo		
Soto Nieves, Guadalupe		
Spadaro, Amedeo	TU int.	16

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,4.

Summary

The main objective of this research project is to analyse alternative proposals concerning the reform of household policies in Spain under a European perspective. Proposals will be evaluated following three fundamentals approaches:

His impact on social exclusion, poverty and income distribution (horizontal and vertical equity), by focusing on social group with higher risk.

His impact on incentive and labour supply (poverty trap)

His impact on the size of taxable income. This last one can be influenced also by others types of behaviour than labour supply choices.

DEPARTAMENT DE FILOLOGIA ESPANYOLA, MODERNA I LLATINA

- **Estudio y edición crítica de las obras inéditas del maestro Bartolomé Jiménez Patón (1589-1640).** GARAU AMENGUAL, Jaume
- **Los libros de emblemas de Francisco Garau (S.J.): investigación intertextual y creación de una aplicación en CD-ROM para su estudio analítico.** BERNAT VISTARINI, Antonio
- **Materialización documental de la interacción de poblaciones en el mundo greco-romano. Paralelismo con el mundo moderno.** SANTIAGO ÁLVAREZ, Rosa Araceli
- **Base de datos de las obras de Emblemática Hispánica bajo Internet. Proyecto 1: Base de datos y edición digitalizada de las obras de Emblemática Hispánica ilustradas, bajo Internet.** LÓPEZ POZA, Sagrario

Projecte núm.: PB96-0190 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Estudio y edición crítica de las obras inéditas del maestro Bartolomé Jiménez Patón (1589-1640).

Codis UNESCO: 6202.

Centre: Departament de Filologia Espanyola, Moderna i Llatina. Edifici Ramon Llull.

Investigador principal: GARAU AMENGUAL, Jaume.

Categoria: TU (àrea de coneixement: Filologia Espanyola).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Garau Amengual, Jaume	TU	32
Monterrubio Prieto, Juan Miguel	TEU	32
Madroñal Durán, Abraham		20

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 1,6.

Summary

Keywords: critical edition, publication of unknown works.

The purpose of this project is to carry out a study, to catalogue and create a critical edition of unstudied and unpublished works of Bartolomé Jiménez Patón (1569-1640). This research stems from the discovery of some manuscript, until now unknown, by various members of this team. Particular texts such as the *Cátedra de erudición*, *El virtuoso discreto*, the sixteenth volume of the *Comentarios de erudición*. An important part of this work is going to constitute in the study of works like the *Perfecto predicador* (Baeza, 1612) and the distinct works that the humanist wrote, till the end of his life, centered on his reflexion over the problems of his time, *Reforma de trajes* (Baeza, 1638), or *Discurso sobre los tufos, copetes y calvas* (Baeza, 1639), among others that are mentioned in this project.

Projecte núm.: PB98-0134 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Los libros de emblemas de Francisco Garau (S.J.): investigación intertextual y creación de una aplicación en CD-ROM para su estudio analítico.

Codis UNESCO: 550505.

Centre: Departament de Filologia Espanyola, Moderna i Llatina. Edifici Ramon Llull.

Investigador principal: BERNAT VISTARINI, Antonio.

Categoria: TU (àrea de coneixement: Literatura Espanyola).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bernat Vistarini, Antonio	TU	16
Fernández Coca, Antonio	TEU	16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,8.

Summary

Keywords: history of literature, emblems, iconography, religion, symbols, data bank, automatic documentation.

Creation of a textual and iconographic data bank of emblems by Francisco Garau (S.J.). Bibliographic research and textual establishment of the three books by Garau (*El sabio instruido de la naturaleza*, *El Olimpo del sabio instruido*, *Tercera parte del sabio instruido*). Analysis of the sources used by this author and the comparison with other emblem books produced in Spain. Creation of an application for the analytical consulting of this collection of emblems on CD-ROM.

Projecte núm.: PB97-0173 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Materialización documental de la interacción de poblaciones en el mundo greco-romano. Paralelismo con el mundo moderno.](#)

Centre: Universitat Autònoma de Barcelona.

Investigadora principal: [SANTIAGO ÁLVAREZ, Rosa Araceli.](#)

Categoria: CU.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Santiago Álvarez, Rosa Araceli Bosch Juan, M. Carme	TU	16

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,4.

Projecte núm.: TEL96-1390-C02-01 (CICYT). Programa nacional d'aplicacions i serveis telemàtics.

Títol: [Base de datos de las obras de Emblemática Hispánica bajo Internet. Proyecto 1: Base de datos y edición digitalizada de las obras de Emblemática Hispánica ilustradas, bajo Internet.](#)

Centre: Universidad de La Coruña.

Investigadora principal: [LÓPEZ POZA, Sagrario.](#)

Categoria: TU.

Membres de l'equip	Categoria	Dedicació (h/setm.)
López Poza, Sagrario		16
Bernat Vistarini, Antonio	TU	16
Blanco Gómez, Emilio		16
Brage González, Javier		40
Canosa Hermida, Begoña		40
García Arranz, José Julio		16
González Muñoz, Fernando		16
Lamarca Ruíz de Eguilaz, Rafael		40
Pena Suciro, Nieves		40

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,4.

DEPARTAMENT DE FILOSOFIA

•**La justicia y las transformaciones sociales en la crisis del Estado de Bienestar.** RIUTORT
SERRA, Bernat

Projecte núm.: PB96-0936-C05-04 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [La justicia y las transformaciones sociales en la crisis del Estado de Bienestar.](#)

Codis UNESCO: 740102.

Centre: Departament de Filosofia. Edifici Ramon Llull.

Investigador principal: [RIUTORT SERRA, Bernat.](#)

Categoria: TU (àrea de coneixement: Filosofia Moral).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Riutort Serra, Bernat	TU	16
Carbonero Gamundí, M. Antònia	TEU int.	16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,8.

Summary

The Welfare State has been questioned in the policies of a number of Western countries since the eighties, particularly in the United States, with Reagan and Bush, and in the United Kingdom, with M. Thatcher. This questioning has had a double presence, one in the practical world of everyday politics, and the other in the theoretical justifications of that view, based mainly on the works by Hayek and Nozick. Both one and the other have been upheld by the crumbling of the Eastern European Communist countries, leading to the view of the so-called "pensamiento único". This work, while reviewing the general outlines of this change, tries to examine the kind of social transformations resulting from that approach, and to relate them to the usual notions of justice which have been put in contrast.

DEPARTAMENT DE FÍSICA

- **Efecto de los cambios microestructurales sobre la transformación martensítica en aleaciones base Cu.** CESARI ALIBERCH, Eduard
- **Fenómenos colectivos en sistemas cuánticos de muchos cuerpos.** CASAS AMETLLER, Montserrat
- **Modelo unificado de mosfet's submicrónicos, adecuado a la simulación de circuitos de muy bajo consumo. Análisis de parámetros estratégicos.** GARCIA MORENO, Eugeni.
- **Excitación y propagación de ondas magnetohidrodinámicas en la corna solar.** BALLESTER MORTES, Josep Lluís
- **Los estereotipos de género en el currículo científico y técnico de secundaria. Actitudes y preferencias de alumnado y profesorado.** VÁZQUEZ ALONSO, Ángel.
- **Métodos analítico-numéricos en relatividad computacional.** BONA GARCÍA, Carles
- **Desarrollo de técnicas avanzadas de verificación para circuitos digitales submicrónicos.** SEGURA FUSTER, Jaume Agapit
- **Sistemas cuánticos de muchos cuerpos: fermiones y bosones.** CASAS AMETLLER, Montserrat
- **Caracterización de aleaciones con memoria de forma producidas por solidificación rápida ("melt-spinning).** CESARI ALIBERCH, Eduard
- **Herramientas para el desarrollo del test en circuitos integrados mixtos analógicos/digitales.** GARCIA MORENO, Eugeni
- **Estudi i optimització de l'aprofitament dels residus d'incineradora per al seu ús en carreteres.** SEGUÍ PALMER, Maria Concepció
- **Análisis de los datos del tercer estudio internacional de matemáticas y ciencias (TIMSS) desde la perspectiva del sistema educativo español.** VÁZQUEZ ALONSO, Ángel
- **Física estadística, fenómenos no lineales y sus aplicaciones.** SAN MIGUEL RUIBAL, Maximino
- **Perturbación modal de diodos láser.** BALLE MONJO, Salvador
- **Sistema per a la Gestió de l'Entorn Marí (SIGEMAR).** TINTORÉ SUBIRANA, Joaquim

Projecte núm.: PB95-0340 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Efecto de los cambios microestructurales sobre la transformación martensítica en aleaciones base Cu.

Codis UNESCO: 332108.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: CESARI ALIBERCH, Eduard.

Categoria: CU (àrea de coneixement: Física Aplicada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cesari Aliberch, Eduard	CU	16
Seguí Palmer, M. Concepció	TU	32
Amengual Colom, Antoni	TU	16
Pons Morro, Jaume	TU	32
Picornell Alou, Catalina	TEU	32
Hierro Riu, Ferran	Tèc.	16
Font Ferrer, Joan	TU (UPC)	16
Muntasell Pla, Joaquim	TU (UPC)	32

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 3,6.

Summary

Keywords: martensitic transformation, shape memory effect, microstructure, precipitates.

The behaviour of Cu-based shape memory alloys is strongly microstructure dependent. Microstructural modifications as introduced through specific thermomechanical treatments influence aspects (i.e. transformations temperatures, hysteresis) which are decisive to the potential use of those alloys.

With basis in previous results mainly obtained for Cu-Zn-Al alloys, the present projects aims to go deeply into the fundamental aspects related to two types of microstructural modifications, such as introduction of γ precipitates and dislocations (generated either by repetitive cycling through the martensitic transformation or through industrial-type processes such as rolling) and their influence on the shape memory effect and the martensitic stabilization.

The scheduled work centers on Cu-Al-Ni type alloys with grain refiners (such as B and Ti) which, in spite of their higher complexity, are nowadays the most interesting because of their high transformation temperatures (above 100°C).

Projecte núm.: PB95-0492 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Fenómenos colectivos en sistemas cuánticos de muchos cuerpos.

Codis UNESCO: 2207.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigadora principal: CASAS AMETLLER, Montserrat.

Categoria: CU (àrea de coneixement: Física Atòmica, Molecular i Nuclear).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Casas Ametller, Montserrat	CU	32
Garcias Gomila, Francesca	TU	32
Serra Crespí, Llorenç	TU	32
Puente Ferrà, Antoni	TU	32

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 3,2.

Summary

Keywords: metal clusters, halo nuclei, quantum liquids and superconductivity.

The aim of this project is to analyse collective phenomena in several quantal many body systems. In particular we are interested in the following systems:

a) Metal clusters: pseudopotential models and spin dependent energy density functionals (ground and excited states, momentum distribution of electrons and fission barriers).

b) Quantum liquids: energy density functionals with backflow-like effects (^4He clusters with atomic impurities).

c) Neutron halo nuclei (symmetry energy and halo size. Maximum entropy principle).

d) Superconductivity as a Bose-Einstein condensation phenomenon (determination of critical temperatures)

Projecte núm.: TIC96-0593 (CICYT). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: Modelo unificado de mosfet's submicrónicos, adecuado a la simulación de circuitos de muy bajo consumo. Análisis de parámetros estratégicos.

Codis UNESCO: 330703.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: GARCIA MORENO, Eugeni.

Categoria: CU (àrea de coneixement: Tecnologia Electrònica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Garcia Moreno, Eugeni	CU	16
Segura Fuster, Jaume Agapit	TU	16
Roca Adrover, Miquel Jesús	TEU	16
Isern Riutort, Eugeni M.	TEU	16
Pascual Tortella, Josep	As.	16
Iñiguez Nicolau, Benjamín	B	40

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 3.

Summary

Keywords: submicron MOSFET, low-voltage, leakage, substrat-current.

The aim of this project is to develop MOSFET models of sub-quarter micron technologies, intended for circuit simulation; for stationary (current model) as well as dynamic (charge model) regime. Both models have to be unified for all the normal operating regions, and all the functions and their derivatives will have infinite order of continuity. These features will make the models particularly suitable for analog circuit analysis, specially in low voltage in the border between two regions. The models will be incorporated in commercial circuit simulators.

Besides the usual features of these models, we want to include some specific ones: accurate analysis of leakage and substrate currents, radiation effects, common defects due to the fabrication process,... The model will be compared with experimental results, which implies the design of appropriate test circuits and the development of an extraction parameter program. To show the benefits of the model, we will design and fabricate demonstration circuits, these circuits will be analyzed with our model showing their strategic parameters.

Projecte núm.: PB96-0092 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Excitación y propagación de ondas magnetohidrodinámicas en la corna solar.](#)

Codis UNESCO: 2106, 2102.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger

Investigador principal: [BALLESTER MORTES, Josep Lluís.](#)

Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Ballester Mortes, Josep Lluís	TU	32
Oliver Herrero, Ramon	TU	32
Arregui Uribe-Etxeberria, Iñigo	B	32

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 2,4.

Summary

Keywords: sun, solar corona, prominences, magnetohydrodynamic waves.

The aim of this project is to improve the knowledge about the excitation and propagation of magnetohydrodynamic waves in solar coronal structures such as prominences, arcades, loops, current sheets, etc. The main goal is to obtain dispersion relations and diagnostic diagrams which would allow to compare easily theoretical predictions with observational results. The study of the oscillations of the physical parameters of the system (velocity, pressure, magnetic field) will help to clarify the physical conditions of such system. On the other hand, the project contains an observational part, to be performed using ground and space based telescopes, which will provide information able to be compared with theoretical results. Besides the information about oscillations present in the system, observational data will inform about the physical properties of the studied structures which will allow to improve the theoretical models and, using such improved models, to obtain a better agreement between observational results and theoretical predictions.

Projecte núm.: Programa sectorial d'estudis de les dones i del gènere (CICYT).

Títol: Los estereotipos de género en el currículo científico y técnico de secundaria. Actitudes y preferencias de alumnado y profesorado.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: VÁZQUEZ ALONSO, Ángel.

Categoria: AS. (àrea de coneixement: Física Aplicada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Vázquez Alonso, Ángel	As.	32
Manassero Mas, M. Antònia	TU	16
Fernández Bennàssar, M. Carme	TU	10
Estella Escudero, Juana	TEU	20
Serra Cifre, Bartomeu Jaume	CU	10
Coll Marí, Lucas		32
Erice Ruiz, M. Carmen	TEU	32
Picornell Alou, Catalina	TEU	6

Nombre total d'investigadors de la UIB: 7.

Total EJC/setmana: 3,15.

Summary

Keywords: gender&science, science stereotypes, science text books, science attitudes.

The consequences of the science's gender stereotype have been widely described and would embrace the different preferences of men and women with respect to the science topics, the school achievement and some attitudes related to science unfavorable for women, and a low choice of scientific or technological careers and professions by women which leads to the underrepresentation of women inside the scientific community. The feminist analysis considers that science is a masculine discipline, in as much as the values assumed by the methodology and the scientific community predominantly reflect masculine values that are the cause of the previous gender results. This study intends to identify the features of the gender stereotypes in the nature of science that are present in the scientific and technological curriculum of the basic and obligatory education of the last stage. This objective is developed evaluating different variables related to gender in science education: the analysis of gender differences in the scholastic results in secondary education scientific matters, the students' experiences and preferences, the students' and teachers' attitudes towards science and scientists, and the presence of the gender stereotype in the nature of science as it is developed in the science and technology.

Projecte núm.: PB97-0134 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Métodos analítico-numéricos en relatividad computacional.](#)

Codis UNESCO: 210105.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: [BONA GARCÍA, Carles.](#)

Categoria: CU (àrea de coneixement: Física Teòrica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bona Garcia, Carles	CU	32
Carot Giner, Jaume Jesús	TU	32
Mas Franch, Lluís	CU	32
Massó Bennàsar, Joan	TU	32
Stela Fiol, Joan	TEU	32

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 4.

Summary

Keywords: general relativity, gravitational waves.

The application of analytical techniques to the study of initial, boundary and gauge conditions in Numerical Relativity is proposed. Using these conditions, the proposal is to build up tridimensional numerical codes to describe compact objects (black holes and/or neutron stars). Using these codes, the proposal is to compute the wave patterns needed to improve, by using the matched filtering technique, the sensibility of the laser interferometer gravitational waves detectors (LIGO, VIRGO) now under construction.

Projecte núm.: TIC98-0284. Progama nacional de tecnologies de la informació i de les comunicacions.

Títol: Desarrollo de técnicas avanzadas de verificación para circuitos digitales submicrónicos.

Codis UNESCO: 3307.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: SEGURA FUSTER, Jaume Agapit.

Categoria: TU (àrea de coneixement: Tecnologia Electrònica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Segura Fuster, Jaume Agapit	TU	16
Garcia Moreno, Eugeni	CU	16
Roca Adrover, Miquel Jesús	TEU	16
Isern Riutort, Eugeni Miquel	TEU	16
De Benito Crossetti, Carol	As.	32
Sainz Gómez, José Antonio		16

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2,4.

Summary

Keywords: defect and fault modeling, integrated circuit testing, microelectronic design, sub-micron integrated circuits.

The state of the art of the microelectronic technologies has brought the capability of fabricating devices in the sub micron range. One of the characteristics of such as transistors is that they show leakage currents which are much higher than the levels drawn by devices in technologies beyond the micron. These currents may limit the effectivity of test techniques based on monitoring non logical parameters, which have been shown to provide higher coverage in CMOS technologies with respect to logic based methods. The research proposal presented is oriented to extend the capabilities of one of the parametric test techniques most used (IDDQ testing), to submicron circuits. The method consists in to consider both the static and dynamic parts of the current power supply, and use the charge dirven into the circuit (the integral of the overall current) as the observable for test. Using the charge as the observable for test provides basically to advantages: it can be aplyed to circuits with a background leakage current, and may detect defects preventing current. These two main characteristics represent an extension of IDDQ testing because it allows the detection of defects where IDDQ effectivity is poor, and also it can be applied to submicron ICs. The main objectives of the research proposed include a sistematic characterization of the charge driven into non defective circuits to obtain a reference to distinguish between good and bad parts. Next, the effect of several faults on the charge behavior will be investigated, developing the required fault models. Of particular interest is the application of the technique at the circuit level, developing the heuristic required to obtain the imput test vectors that sensitize the posible defects into the circuit. Additionally the desing of specific circuitry to sense the charge will be considered. Finally the technique will be applied to commercial circuits to evaluate its practical effectivity.

Projecte núm.: PB98-0124 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: [Sistemas cuánticos de muchos cuerpos: fermiones y bosones.](#)

Codis UNESCO: 2207.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: [CASAS AMETLLER, Montserrat.](#)

Categoria: CU (àrea de coneixement: Física Atòmica, Molecular i Nuclear).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Casas Ametller, Montserrat	CU	32
Garcias Gomila, Francesca	TU	32
Serra Crespí, Llorenç	TU	32
Puente Ferrà, Antoni	TU	32

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 3,2.

Summary

Keywords: electronic nanostructures, metal clusters, superconductivity, nuclear multifragmentation, halo nuclei and quantum liquids.

The aim of this project is to analyse several quantal many body systems. In particular we are interested in the following items:

- a) Electronic nanostructures and clusters of transition metals: ground state and excitations, temporal processes.
- b) High Tc superconductivity as a Bose-Einstein Condensation (BEC). Determination of critical temperatures.
- c) Nuclear multifragmentation and halo nuclei. Molecular dynamics and Information theory.
- d) Large He clusters doped with alkaline and alkaline earth metals. Energy Density functional model.

Projecte núm.: PB98-0127 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Caracterización de aleaciones con memoria de forma producidas por solidificación rápida ("melt-spinning).

Codis UNESCO: 331208.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: CESARI ALIBERCH, Eduard.

Categoria: CU (àrea de coneixement: Física Aplicada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cesari Aliberch, Eduard	CU	20
Picornell Alou, Catalina	TEU	32
Seguí Palmer, M. Concepció	TU	32
Pons Morro, Jaume	TU	32
Amengual Colom, Antoni	TU	16
Hierro Riu, Ferran	Téc.	16
Font Ferrer, Joan	TU (UPC)	32
Muntasell Pla, Joaquim	TU (UPC)	32
Santamarta Martínez, Rubén	B	40

Nombre total d'investigadors de la UIB: 7.

Total EJC/setmana: 6,3.

Summary

Keywords: martensitic transformation, shape memory, rapid solidification, melt-spinning, microstructure.

The characterization of Cu- and Ni-Ti-based shape memory alloys (SMA) produced by means of rapid solidification (melt-spinning, MS) constitutes the objective of the present project. Finished (or almost finished) products can be obtained by means of the MS technique, although some microstructural features, like small grain size, high vacancy concentration and incomplete atomic order, which influence the martensitic transformation responsible of the particular properties of SMA, are also introduced. The major number of applications, already developed or potential, use the Cu- and Ni-Ti-based systems. A special focus of interest is constituted by the SMA with high transformation temperatures (above 100°C) and good stability at temperatures 200-300°C, which limits the selection to the Cu-Al-Ni (with additions like Mn, B, Ti) and Ni-Ti-X (X=Cu, Hf, Nb). The MS ribbons already produced (in the frame of an european INCO project) show a good macroscopic quality, although its extensive and systematic characterization is needed. The work plan is divided in four topics: (1) Reproducibility and stability of transformation temperatures; (2) Ageing effects; (3) Thermomechanical cycling and (4) Superelasticity and DMA. These topics are closely related with the applications requirements and the results will also give information on processes like ordering, precipitation and defects generation, whose basic interest extends beyond the SMA field.

Projecte núm.: TIC99-0277 (DGES). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: Herramientas para el desarrollo del test en circuitos integrados mixtos analógicos/digitales.

Codis UNESCO: 330703.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: GARCIA MORENO, Eugeni.

Categoria: CU (àrea de coneixement: Tecnologia Electrònica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Garcia Moreno, Eugeni	CU	16
Isern Riutort, Eugeni	TEU	16
Picos Gaya, Rodrigo		32
Roca Adrover, Miquel	TEU	16
Segura Fuster, Jaume	TU	16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 1.

Summary

Keywords: fault modelling and simulation, text mixed A/D circuits, current consumption, sensors, stimuli generation, submicron technologies.

Testing is a crucial part in the design and production of integrated circuits. Its difficulty grows with the device dimension shrinking, the increase in the circuit complexity and with the coexistence of analog and digital parts in the same chip. In mixed analog/digital (A/D) circuits, testing analog blocks require more time effort, although the area of the analog blocks often smaller. The production of VLSI analog mixed A/D circuits has suffered a tremendous increase in the last years. But testing of the analog blocks is now the bottleneck in its future development. Therefore, test optimisation in mixed A/D circuits is a very active research field nowadays. Test optimisation requires better fault models than existing ones. The proposed work is oriented towards the creation of a realistic fault model dictionary in mixed A/D CMOS circuits, at high abstraction levels. These models will be incorporated in circuit simulators based on SPICE. The goal is to obtain fault simulation tools, easy to use and effective, oriented to test optimisation. These tools could be used by the teams devoted to test development in analog and mixed A/D circuits. The scope of the project includes experimental validation of the fault models developed, designing specific circuits for this task. Also the effectiveness of the input stimuli in revealing faulty circuits will be analysed.

Projecte d'investigació en tecnologies de la informació i comunicacions, medi ambient, educació i foment (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: [Estudi i optimització de l'aprofitament dels residus d'incineradora per al seu ús en carreteres.](#)

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Codis UNESCO: 2301.

Investigador principal: [SEGUÍ PALMER, Maria Concepció.](#)

Categoria: TU (àrea de coneixement: Física Aplicada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Seguí Palmer, M. Concepció	TU	10
Cesari Aliberch, Eduard	CU	8
Pons Morro, Jaume	TU	8
Amengual Colom, Antoni	TU	6
Picornell Alou, Catalina	TEU	8
Forteza Coll, Rafel	TU	10
Bauzà de Mirabó, Francesca	B	10
Far Sánchez, Maria	B	35

Nombre total d'investigadors de la UIB: 8.

Total EJC/setmana: 2,97.

Summary

Incineration of municipal solid wastes (MSW) produces by-products which can be broadly classified as bottom and fly ash, with compositions similar to geological materials but enriched in heavy metals (specially the fly ash). Since incineration of MSW started to be applied, there has been a search for other possibilities but landfilling the incineration residues; in countries like the Netherlands, Sweden or Denmark these residues are currently being used as partial aggregate substitute in pavements. The main goal of this project is the physical and chemical characterization of the local incineration residues towards their eventual reutilization. The project is designed for a duration of one year and is divided into two main tasks: (1) study of bottom ash and its applicability in roads construction; and (2) fly ash characterization and prospective over possible applications. Since incineration by products might contain heavy metals, the project includes not only specific studies concerning their performance as pavement elements but also assessment on the environmental effects, both short and long term, of eventual release of contaminants. Task (1) is expected to result in short term transfer of knowledge to the related industry. The project counts on the support of TIRME, SA., manager of the local incineration plant, and will be developed by a multidisciplinary team including members of the Physics and Chemistry Departments of the UIB.

Projecte núm.: Programa CIDE. Ministeri d'Educació i Cultura.

Títol: Análisis de los datos del tercer estudio internacional de matemáticas y ciencias (TIMSS) desde la perspectiva del sistema educativo español.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: VÁZQUEZ ALONSO, Ángel.

Categoria: AS. (àrea de coneixement: Física Aplicada).

Membres de l'equip	Categoria
Vázquez Alonso, Ángel	As.
Bernal Garcias, Fernando	Col.
Barea Roig, Rafel	Tèc.

Summary

The Third International Mathematics and Science Study (TIMSS) is a collaborative research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). The TIMSS tested and collected information about students from 45 countries in three levels of the educational system. In 1995 Spain participated in the level 2, students enrolled in the two adjacent grades that contain the largest proportion of 13-years old students (7th and 8th school grades). TIMSS measured student achievement in mathematics and science through written tests with multiple-choice, problems and free-response format questions and performance tasks (just for a sub-sample). Moreover TIMSS gathered data (around 1500 variables) related to instructional strategies in science and mathematics, classroom activities, school characteristics, student attitudes and demographic characteristics, through questionnaires completed by students, teachers and school principals. The current project attempts to study and analyse Spain's TIMSS data, which portrays a major picture about the quality of science and mathematics education in our schools.

Projecte núm.: PB94-1167 (DGICYT). Programa sectorial de promoció general del coneixement. **Títol:** Física estadística, fenómenos no lineales y sus aplicaciones.
Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger.
Investigador principal: SAN MIGUEL RUIBAL, Maximino.
Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

Veure Institut Mediterrani d'Estudis Avançats (pàgina 197)

Projecte núm.: TIC98-0418-C05-02 (DGES). Programa nacional de tecnologies de la informació i de les comunicacions.
Títol: Perturbación modal de diodos láser.
Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger.
Investigador principal: BALLE MONJO, Salvador.
Categoria: TU (àrea de coneixement: Física de la Matèria Condensada).

Veure Institut Mediterrani d'Estudis Avançats (pàgina 212)

Projecte d'investigació en tecnologies de la informació i de les comunicacions, i en sistemes d'informació geogràfica aplicats a la planificació educativa (Conselleria d'Educació, Cultura i Esports del Govern Balear).
Títol: Sistema per a la Gestió de l'Entorn Marí (SIGEMAR).
Codis UNESCO: 2510.
Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger.
Investigador principal: TINTORÉ SUBIRANA, Joaquim.
Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Veure Institut Mediterrani d'Estudis Avançats (pàgina 211)

DEPARTAMENT D'INFERMERIA

- **Características del SIDA en fase terminal: evolución clínica, calidad de vida y uso de servicios.**
THOMÀS MULET, Vicenç
- **Efectos celulares y moleculares de la hipoxemia crónica y de su corrección mediante oxigenoterapia domiciliaria sobre el metabolismo leucocitario en pacientes con EPOC.** TOGORES SOLIVELLAS, Bernat
- **Estudio de la eficacia del tratamiento con presión positiva en la vía aérea (CPAP) en el síndrome de apneas obstructivas del sueño de carácter leve.** BARBE ILLA, Ferran

Projecte núm.: FIS97-0026-01. Fons d'Investigació Sanitària.

Títol: Características del SIDA en fase terminal: evolución clínica, calidad de vida y uso de servicios.

Codis UNESCO: 3205.

Centre: Departament d'Infermeria-Gerència d'Atenció Primària Primària de Mallorca (INSALUD).

Investigador principal: THOMÀS MULET, Vicenç.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Thomàs Mulet, Vicenç		20
Álvarez Vineut, José Federico		12
Cifuentes Luna, Carmen		12
Company Bauzà, Rosa		12
Feijoo Iglesias, María Belén		15
De la Fuente Carrillo, Concepción		15
García Carpintero, Custodia		15
Garcia Mas, Alexandre	TU	12
Homar Borràs, Francesc		12
Llinàs Servera, Joan		15
Llobera Cànaves, Joan	As.	12
Llull Sarralde, Micaela		12
Maura Arbós, Maria		15
Navarro Serrano, Magdalena		15
Nicolau Riutort, Antoni		12
Payeras Cifre, Antoni		12
Polvorinos López, María Lourdes		12
Pou Bordoy, Joan		12
Riera Jaume, Melsion		12
Roca Bennàssar, Miquel	TU	
Santamaria Semis, Joan		20
Villalonga Riera, Concepció		12

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,6.

Summary

Keywords: HIV/AIDS disease, terminal care, quality of life, use of health services.

Study objective: to determine the characteristics and evolution, during the final phase of AIDS patients, of both clinical and therapeutic aspects, quality of life, care needs and use of services.

Design: descriptive study: series of cases, with follow-up since the beginning of the terminal phase until death.

Setting: Balearic Islands (Mallorca, Menorca and Ibiza-Formentera) with 713.467 inhabitants.

Study subjects: AIDS patients as they meet the criteria defined by the experts panel as entering in the terminal phase of the illness, followed-up in the five public hospitals of the Balearics, during 18 months (or up to 118 cases).

Interventions: the internal medicine physician will collect the initial data once the patient meets the criteria for entering the study. The patient will be followed-up, registering all contacts he/she has with the hospital and the primary care services and with scheduled monthly contacts, collecting the information by using a previously defined format in order to monitor the evolution.

Measurements: clinical and therapeutic evolution in terms of symptoms (STAS), mental health (MMSE, HAD), quality of life (Karnofsky, Barthel and social OARS) and use of health (hospital and primary care) and social services.

Projecte núm.: FIS98-0488. Fons d'Investigació Sanitària.

Títol: Efectos celulares y moleculares de la hipoxemia crónica y de su corrección mediante oxigenoterapia domiciliaria sobre el metabolismo leucocitario en pacientes con EPOC.

Investigador principal: TOGORES SOLIVELLAS, Bernat.

Centre: Departament d'Infermeria-Hospital Son Dureta.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Togores Solivellas, Bernat		20
Carrera Lamarca, Miguel		20
Agustí Garcia-Navarro, Àlvar		
Garcia Palmer, Fco. José	TU	
Pericàs Beltran, Jordi	TEU	20
Sauleda Roig, Jaume		
Tarraga Gordiola, Salvador Andreu		28
Villaverde González, José Manuel		20

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,5.

Summary

To asses the effects of chronic hypoxemia (and its correction by oxygentherapy) upon bioenergetics (glycolitic and oxidative pathway) and mitochondrial gene expression (mRNA of citochrome oxidase and rRNA of 12 S mitochondrials units) of peripheral leucocytes (neutrophils and lymphocytes) in patients with COPD, before and after two months of domiciliary oxygentherapy (DO). Design: longitudinal, prospective and controlled. Setting: Outpatients in stable condition. Subjects: 60 male individuals (40-75): a) Group DO: 20 COPD patients requiring DO; b) Group non-DO: 20 COPD patients without chronic respiratory failure; c) 20 healthy subjects matched by age (± 5 yr.) and sex. Interventions: peripheral venous blood sampling and lung function tests (forced spirometry and arterial blood gases) and blood analysis. Measurements: enzyme activities of oxidative metabolism (COX) and glycolisis (fosfofructoquinase and lactodehydrogenase), and b) Mitochondrial gene expression: mRNA COX-1, rRNA 12 S (spectrophotometry, Northern Blot and polymerase chain reaction).

Projecte núm.: FIS98-0055-04. Fons d'Investigació Sanitària.

Títol: Estudio de la eficacia del tratamiento con presión positiva en la vía aérea (CPAP) en el síndrome de apneas obstructivas del sueño de carácter leve.

Centre: Departament d'Infermeria-Unitat d'Investigació (Hospital Son Dureta).

Investigador principal: BARBE ILLA, Ferran.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Barbe Illa, Ferran		20
Bosch Artigues, Margalida		20
Muñoz Vidal, Araceli		20
Pericàs Beltran, Jordi	TEU	20

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,5.

Summary

Keywords: CPAP, sleep apnea, sleepiness, quality of life.

Study objective: to evaluate the efficacy of nasal CPAP in mild sleep apnea patients, comparing with general measures. Design: randomised, controlled study. 2 years. Setting: sleep units in six hospitals of Spain. Patients: mild SAS patients, diagnosed by full polysomnography. Interventions: full polysomnography for diagnosis and titration of CPAP. Domiciliary CPAP during 6 months. Measurements: degree of sleepiness; cognitive status; vigilance; functional capacity related to SAS; quality of life.

DEPARTAMENT DE PSICOLOGIA

- **Evaluación de un programa informático para el tratamiento del miedo a volar.** BORNAS AGUSTÍ, F. Xavier
- **Análisis de las características psicosociales que diferencian a maltratadores (en los casos de violencia doméstica) de no maltratadores.** BOSCH FIOL, Esperança
- **Variables predictoras de la eficacia de un tratamiento de exposición asistida por ordenador en el tratamiento del miedo a volar.** BORNAS AGUSTÍ, F. Xavier
- **La evaluación de la impulsividad y los déficits atencionales y su implicación en problemas de rendimiento académico del niño.** SERVERA BARCELÓ, Mateu
- **Análisis del trabajo emocional y su influencia sobre el burnout de los empleados y las evaluaciones de los usuarios.** MANASSERO MAS, M. Antònia
- **Decisiones legales por jurados: efectos cognitivos y de grupo implicados.** ARCE FERNÁNDEZ, Ramón
- **Implantación de un sistema de calidad en la enseñanza superior basado en el modelo europeo de gestión para la mejora de la calidad.** RODRÍGUEZ MARÍN, Jesús

Projecte núm.: PB96-0199 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Evaluación de un programa informático para el tratamiento del miedo a volar.

Codis UNESCO: 610301.

Centre: Departament de Psicologia. Edifici Guillem Cifre de Colonya.

Investigador principal: BORNAS AGUSTÍ, F. Xavier.

Categoria: TU (àrea de coneixement: Personalitat, Avaluació i Tractament Psicològics).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bornas Agustí, F. Xavier	TU	16
García de la Banda García, Gloria	TEU	32
Tortella Feliu, Miquel Rafael	TEU	32
Pérez Pareja, Francisco Javier	TU	16
Martínez-Abascal García, Ángeles	As.	16
Llabrés Bordoy, Jordi	Aj. EU	16

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 3,2.

Summary

Keywords: specific phobia, flying fear, software.

In spite of its prevalence, flying phobia has received much less attention than other anxiety and phobic disorders. The controlled flying treatment studies are few and have focused on "in vivo" and other exposure techniques. These techniques imply economic and practical problems which have had a negative impact on research. According to this, a new computer treatment programme has been developed by our research team. This innovative computer programme has been developed by our research team. This innovative computer programme is able 1) to reproduce fixed and animated images and realistic sounds, 2) to select, according to previous assessment results, a hierarchical stimulus exposure, 3) to control stimulus time exposure related to patient information. This project aims to assess the treatment efficacy of our computer programme and to compare it to other traditional intervention programmes which do not involve exposure.

Projecte núm.: PB98-0122 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Análisis de las características psicosociales que diferencian a maltratadores (en los casos de violencia doméstica) de no maltratadores.

Codis UNESCO: 611200.

Centre: Departament de Psicologia. Edifici Guillem Cifre de Colonya.

Investigadora principal: BOSCH FIOL, Esperança.

Categoria: TEU (àrea de coneixement: Psicologia Bàsica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bosch Fiol, Esperança	TEU	32
Ferrer Pérez, Victòria Aurora	TU	16
Manassero Mas, Maria Antònia	TU	16
Gili Planas, Margalida	TEU	16
García Buades, M. Esther	TEU int.	16

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2,4.

Summary

Keywords: domestic violence, male batterers, perpetrator profile.

Domestic violence have been regarded an important social problem during last years. National and international institutions as well as scientist have been increased their concern about solutions of this issue. The perpetrator profile is one of the questions that have generated more interest, that means the sociodemographic and psychosocial features that differentiate male batterers from male non batterers. From this concern have been raised an amount of literature that have only give us provisional conclusions. The objective of the present study is analysing comparatively the perpetrator profile form a double view: on the one hand, a revision of investigations up to the date and, on the other hand, a comparative analysis (between male batterers and non-batterers) on their believes about women and women condition.

Projecte núm.: PB98-0167 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Variables predictoras de la eficacia de un tratamiento de exposición asistida por ordenador en el tratamiento del miedo a volar.

Codis UNESCO: 610301.

Centre: Departament de Psicologia. Edifici Guillem Cifre de Colonya.

Investigador principal: BORNAS AGUSTÍ, F. Xavier.

Categoria: TU (àrea de coneixement: Personalitat, Avaluació i Tractament Psicològics).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bornas Agustí, F. Xavier	TU	32
Tortella Feliu, Miquel	TEU	32
Llabrés Bordoy, Jordi	Aj. EU	16
García de la Banda García, Gloria	TEU	16
Miró Martínez, Jordi		16
Martínez-Abascal, M. Ángeles	TEU int.	16

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2,8.

Summary

Keywords: specific phobia, fear of flying, computer-assisted exposure.

The research project has two main goals. The first aim is to know the characteristics of the patients with fear of flying that are the most relevant ones in order to predict the effectiveness of a computer-assisted exposure (CAE) treatment. The focus of the patient's fear, his or her before-flight anxiety level, and the intensity of his or her fear are the target variables of this research project. The second goal is to make available a self-administered version of the CAE treatment. Any company dealing with air passenger transportation (airlines, tour operators, travel agencies, tourism institutions, etc) could use the CAE treatment with those of their clients who show the personal characteristics found relevant by the research.

Projecte núm.: Programa CIDE. Ministeri d'Educació i Cultura.

Títol: [La evaluación de la impulsividad y los déficits atencionales y su implicación en problemas de rendimiento académico del niño.](#)

Centre: Departament de Psicologia. Edifici Guillem Cifre de Colonya.

Investigador principal: [SERVERA BARCELÓ, Mateu.](#)

Categoria: TEU (àrea de coneixement: Personalitat, avaluació i tractament psicològic).

Membres de l'equip	Categoria
---------------------------	------------------

Servera Barceló, Mateu	TEU
------------------------	-----

Projecte núm.: PB98-1499-C03-02 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: [Análisis del trabajo emocional y su influencia sobre el burnout de los empleados y las evaluaciones de los usuarios.](#)

Centre: Departament de Psicologia. Edifici Guillem Cifre de Colonya.

Investigador principal: [MANASSERO MAS, M. Antònia.](#)

Categoria: TU (àrea de coneixement: Psicologia Social).

Membres de l'equip	Categoria	Dedicació (h/setm.)
---------------------------	------------------	----------------------------

Manassero Mas, M. Antònia	TU	16
García Buades, M. Esther	TEU int.	16
Gili Planas, Margalida	TEU	16
Ferrer Pérez, Victòria	TU	16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 1,6.

Projecte núm.: PB96-0944. Programa sectorial de promoció general del coneixement.

Títol: [Decisiones legales por jurados: efectos cognitivos y de grupo implicados.](#)

Centre: Universitat de Santiago de Compostel·la.

Investigador principal: [ARCE FERNÁNDEZ, Ramón.](#)

Membres de l'equip	Categoria	Dedicació (h/setm.)
---------------------------	------------------	----------------------------

Arce Fernández, Ramón		
Palmer Pol, Alfons Lluís	TU	16
Cajal Blasco, Berta	TU int.	16
Fernández Coll, Cristina	Aj. EU	40

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,8.

Projecte núm.: 1FD97-0558 (DGES). Fondos FEDER.

Títol: [Implantación de un sistema de calidad en la enseñanza superior basado en el modelo europeo de gestión para la mejora de la calidad.](#)

Codis UNESCO: 6114.

Centre: Universidad Miguel Hernández.

Investigador principal: [RODRÍGUEZ MARÍN, Jesús.](#)

Categoria: CU.

Membres de l'equip	Categoria
Rodríguez Marín, Jesús	
López Roig, Sofía	
Mira Solves, José Joaquín	
Aranaz Andrés, Jesús	
Vitaller Burillo, Julián	
Castejón Ortega, José	
Sitges Macià, Esther	
Gómez Gras, José M.	
Galiana Lopera, Domingo	
Zurriaga Llorens, Rosario	
Manassero Mas, M. Antònia	TU
Lorenzo Martínez, Susana	
Ignacio García, Emilio	
Ferrer Pérez, Victoria Aurora	TU

Nombre total d'investigadors de la UIB: 2.

Summary

Keywords: quality, university, european foundation for quality management model.

Foundation: the Spanish University Board published a report two years ago, in which it was defined the guidelines for a quality management in this setting. This report has adopted the recommendations of the European Foundation for Quality Management (EFQM), and proposed a total quality view with three aims: to rationalize the teaching supply; to remove the unnecessary costs; to satisfy the client's needs.

Aim: to clarify and to apply a method accorded EFQM. It includes, tools, strategies and methods to assess, and improve quality. This project attempts to take part actively in the quality system building.

Method: firstly, it will analyze the different experiences in the public institution using the European quality pattern, and afterwards we will analyze the needs of the university staff. Secondly, using qualitative methods it will be decided the elements those will determinate the better form to apply the EFQM in the Spanish University. At last, we want to implant the self-evaluation system and their validity to introduce the EFQM model.

Applicability: this research project tries to take part actively in the construction of a quality culture. Besides, this project searches into to introduce in the public system the point of view of the internal client. This project also takes into account, actual organizational changes and just tries to advance to them. In this way, this project looks for as a concrete benefit to develop a methodology which allows to audit the quality management system.

DEPARTAMENT DE QUÍMICA

- **Reconocimiento molecular mediante receptores tripodales. Síntesis, caracterización estructural y aplicaciones.** COSTA TORRES, Antoni
- **Estudio químico-físico de la interacción entre antibióticos beta-lactámicos y análogos con beta-lactamasas. Caracterización de nuevas estructuras como potenciales cabezas de serie de nuevos antibióticos.** MUÑOZ IZQUIERDO, Francisco
- **Reconocimiento molecular y catálisis mediante el uso de macrobiciclos gigantes.** BALLESTER BALAGUER, Pau
- **Síntesis enantioselectiva de productos enantioméricamente puros mediante procesos catalíticos en medios convencionales y no convencionales.** SAÁ RODRÍGUEZ, José Manuel
- **Influencia de los ultrasonidos en la transferencia de materia: mejora de procesos e implicaciones sensoriales.** ROSSELLÓ MATAS, Carme
- **Contribución a la evaluación, control y reducción del impacto ambiental de las plantas de incineración de residuos sólidos urbanos.** CERDÀ MARTÍN, Víctor
- **Simulación de vertidos de hidrocarburos en ecosistemas costeros: determinación de parámetros experimentales para su aplicación a planes de contingencia.** BERGUEIRO LÓPEZ, José Ramón
- **Influencia de las variables de proceso en la evolución físico-química de algunos productos cárnicos crudos curados.** ROSSELLÓ MATAS, Carme
- **Preparación y caracterización de óxidos metálicos de porosidad controlada.** OTERO AREAN, Carlos
- **Estudios sobre litiasis renal: mecanismos de formación de cálculos.** GRASES FREIXEDAS, Felicià
- **Estudios en química supramolecular: reconocimiento molecular, quimiosensores y autoensamblaje.** BALLESTER BALAGUER, Pau
- **Complejos de metales de transición con moléculas que presentan actividad biológica y/o farmacológica.** TERRON HOMAR, Àngel
- **Tecnologies de la informació aplicades a l'avaluació de vessaments d'hidrocarburs en el mar Balear.** BERGUEIRO LÓPEZ, José Ramón
- **Implementació d'un sistema global de vigilància, control i difusió de les dades sobre qualitat de l'aire.** CERDÀ MARTÍN, Víctor
- **Estimació de l'aromaticitat en derivats d'àcids oxocarbònics.** DEYÀ SERRA, Pere M.

Projecte núm.: PB95-0341 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Reconocimiento molecular mediante receptores tripodales. Síntesis, caracterización estructural y aplicaciones.

Codis UNESCO: 230611.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: COSTA TORRES, Antoni.

Categoria: TU (àrea de coneixement: Química Orgànica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Costa Torres, Antoni	TU	16
Deyà Serra, Pere M.	TU	16
Ballester Balaguer, Pau	TU	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Summary

Keywords: molecular recognition, supramolecular chemistry, tripodands, siderophores, sensors.

This research proposal is addressed to the development of a new series of tripodal receptors. The synthesis follows a modular approach using a triaryl spacer joining up to three building blocks conveniently functionalized. The recognition unit will be changed according the targeted guest. Receptors for polycarboxylic acids, polycarboxylates, tetraalkylammonium salts, ureas, polyhydroxy compounds in nonpolar solvents, and new siderophores in water will be developed. The plan includes their structural characterization by 1D and 2D nmr techniques and FT-ir studies with special focus on the intra-and intermolecular non-covalent forces that modulate the recognition phenomena. Our interest also includes the detection of dimmeric supramolecular species featuring an inner cavity. The practical application of the new systems as chemical biomimetic sensors for ammonium-based biomolecules as well as iron sequestering agents (siderophores) will be also studied.

Projecte núm.: PB96-0596-C02-02 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Estudio químico-físico de la interacción entre antibióticos beta-lactámicos y análogos con beta-lactamasas. Caracterización de nuevas estructuras como potenciales cabezas de serie de nuevos antibióticos.

Codis UNESCO: 2307.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: MUÑOZ IZQUIERDO, Francisco.

Categoria: TU (àrea de coneixement: Química Física)

Membres de l'equip	Categoria	Dedicació (h/setm.)
Muñoz Izquierdo, Francisco	TU	32
Donoso Pardo, Josefa	TU	32
Roig Muntaner, Antoni	CU	32
Frau Munar, Joan	TU	32
Vilanova Canet, Bartomeu	Aj. EU	32
Llinás Martí, Antoni	Aj. EU	32
Coll Parets, Miquel	As.	16

Nombre d'investigadors de la UIB: 7.

Total EJC/setmana: 5,2.

Summary

Keywords: β -lactams, β -lactamasas, antibiotics.

In the present investigation project we wish to synthesize a new set of β and γ -lactam structures and determine their stability against the β -lactamase hydrolysis. On the other hand, we will study the folding-unfolding process of β -lactamasas in presence of antibiotics in order to have a better characterization of the binding site. Meanwhile we will carry out a molecular modeling study of the active site of the β -lactamasas. The analysis of the results allows a more precise knowledge on the mechanism and role of the functional groups at the active site of these enzymes.

Projecte núm.: PB96-0143 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Reconocimiento molecular y catálisis mediante el uso de macrobicyclos gigantes.

Codis UNESCO: 230611.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: BALLESTER BALAGUER, Pau.

Categoria: TU (àrea de coneixement: Química Orgànica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Ballester Balaguer, Pau	TU	16
Costa Torres, Antoni	TU	16
Deyà Serra, Pere M.	TU	16
Morey Salvà, Jeroni	TU	16
Coll Sabrafin, Glòria	As.	16
Suñer Sabater, Guillem A.	As.	16

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 2,4.

Summary

Keywords: molecular recognition, catalysis, hydrogen bonds, macrocycles.

In this research project we propose to develop highly functionalised giant macrocyclic hosts having a spacious interior cavity. For this purpose we will use molecular building blocks which have been successfully used in molecular recognition studies. The interior of the cavity will feature both polar groups (amides) and nonpolar groups (aromatic rings) which will be used as recognition sites with guest molecules. The exterior groups of the cavity will be used to control the solubility in polar and nonpolar solvents. This will allow parallel studies of the same processes to be made in different types of solvent. The combination of polar and apolar recognition sites makes these macrobicycles hosts ideally suited to the complexation of complementary guests. The large size of the cavity will allow complexation either of large guests or more than one guest. Cooperativity in such a multiple binding processes will be investigated. The ability to complex more than one guest in close proximity will lead to study the intramolecular catalysis of reactions inside the cavity. A novel feature of the proposed system is the ability to modulate the molecular recognition properties by selective functionalization of some of the groups outside of the cavity.

Projecte núm.: PB96-0203 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Síntesis enantioselectiva de productos enantioméricamente puros mediante procesos catalíticos en medios convencionales y no convencionales.

Codis UNESCO: 230699.

Centre: Departament de Química. Edifici Mateu Orfila i Rogter.

Investigador principal: SAÁ RODRÍGUEZ, José Manuel.

Categoria: CU (àrea de coneixement: Química Orgànica).

Membres de l'equip	Categoria	Dedicació
Saá Rodríguez, José Manuel	CU	32
Capó Cañellas, Magdalena	B	40
Vega Reynés, Manuel	B	40

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 2,8.

Summary

Keywords: asymmetric catalysis, enantioselection, synthesis in non-conventional solvents.

Basically, the project aims at exploring the action of some new catalysis in enantioselective synthesis carried out in both conventional and non-conventional media. For one, we will assay two novel binaphthalenic homoquiral monophosphins in biphasic systems (either water and a organic solvent or water and a micellar catalyst) for the reduction of allylic esters, the hydrosilylation of alkenes and metal-catalyzed ene reactions. On the other hand, we expect to be able to achieve the enantioselective protonation of either metal enolates, enols or dienols, enolsilylethers and ketenesilylacetal by means of a series of homochiral general acid catalysts ("homochiral Bronsted acids"). Some of these novel compounds are seen as minimalist catalysts for promoting inter or intramolecular hydrolysis, alcoholysis, etc of esters, amides, phosphates, etc. Finally, a series of homochiral Lewis acid derivatives of B, Al, Sc, Ti, Zr will be prepared "in situ" and assayed for "superacid" activity in classic Lewis acid promoted reactions in conventional media. Derivatives of lanthanide triflates and octadentate ligands will also be prepared and assayed for catalytic activity in nonconventional media.

Projecte núm.: ALI96-1180-C04-02 (CICYT). Programa nacional de tecnologia d'aliments.

Títol: [Influencia de los ultrasonidos en la transferencia de materia: mejora de procesos e implicaciones sensoriales.](#)

Codis UNESCO: 330914.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigadora principal: [ROSSELLÓ MATAS, Carme.](#)

Categoria: TU (àrea de coneixement: Enginyeria Química).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Rosselló Matas, Carme	TU	16
Cañellas Mut, Jaume	As.	16
Barrio Terol, Javier	As.	16
Moll, Joana Maria	C	16
Frau Caldentey, Miquel Àngel	C	16
Casals Pedreño, Jerònima	C	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Summary

Keywords: mass transfer, ultrasonics, cheese, dried cured loin, salting.

The main objective of this work is to establish the influence of ultrasonics in mass transfer processes like salting, with the aim of saving time and brine (which would mean a lower waste water and consequently a decrease in the environmental impact). The products under study include cheese and dried cured loin. The study is directed both to the salting process and the evolution of treated (with ultrasonics) and not treated products during ripening. Several process variables like power, frequency and brine temperature, will be studied to establish their influence on the process.

The influence on the quality and evolution of the products will be determined through sensory analysis, and standard analytical procedures (chemical, physical and microbiological).

The sensory implications will be studied through classical methods and others looking for objective measurements. Parameters like hardness, masticability, will be determined by means of the biofeed-back method, to relate these parameters with the efforts made by the muscles during mastication.

Small ultrasonic salting vessels will be built. This activity will allow the transfer of the technology to industrial prototypes.

Projecte núm.: AMB97-0537 (CICYT). Programa nacional d'I+D en medi ambient.

Títol: [Contribución a la evaluación, control y reducción del impacto ambiental de las plantas de incineración de residuos sólidos urbanos.](#)

Codis UNESCO: 2301.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: [CERDÀ MARTÍN, Víctor.](#)

Categoria: CU (àrea de coneixement: Química Analítica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cerdà Martín, Víctor	CU	32
Forteza Coll, Rafael A.	TU	16
Gómez Benito del Valle, Enrique	As.	16
Caro Fernández, Arturo	TEU	16
Colom, Miquel		

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 2.

Summary

Keywords: environmental impact, monitoring, analysis, pollution, atmosphere, waters, automation.

The objective of the present project is to contribute to the evaluation of the environmental impact produced by the setting up of a modern urban solid waste incinerator plant. For this purpose, the supervising plan established by the competent authorities regarding gas emissions and inmissions, waters, solid residues and soils will be followed. Contribution to the development of a new analytical methodology in order to solve a series of needs and deficiencies detected on a series of preliminary studies is intended.

With regard to environmental impact control the main gaps of the existing analytical methodologies for the control of both gas emissions and inmissions will be considered, either in relation to organic components (aromatic polycyclic compounds, dioxines, furanes, etc) or inorganic components (Hcl. Hg, etc.).

With regard to services, automatic methods of analysis which facilitate the control of different types of waters involved in the process of energy cogeneration will be developed in order to reduce in this way corrosion processes and wear out of turbines.

A special emphasis on the study of inertization processes of the resulting ashes is intended to increase the immobilization of the potentially polluting heavy metals which take place in dumping grounds.

Projecte núm.: MAR97-0415 (CICYT). Programa nacional de ciència i tecnologia marines.

Títol: Simulación de vertidos de hidrocarburos en ecosistemas costeros: determinación de parámetros experimentales para su aplicación a planes de contingencia.

Codis UNESCO: 3308.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: BERGUEIRO LÓPEZ, José Ramón.

Categoria: TU (àrea de coneixement: Enginyeria Química).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bergueiro López, José Ramón	TU	16
Lalucat Jo, Jordi	CU	16
Domínguez Laseca, Félix	As.	16
Pérez-Navarro Gómez, Ángel		
Morales Correas, Nuria		

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Summary

Keywords: oil spill, modeling, dispersants, biodegradation accelerators, contingency plants.

The goal of this proposal is the global study at the processes provoked by hydrocarbon spills in the sea and the development of simulation techniques to monitor the spill and for its control by physical, chemical and biological techniques, together with the experimental verification of these techniques. The deduced results will enable the definition of the basic procedures to be included in a Contingency Plan oriented to reduce the environmental impact. This Contingency Plan has to consider in the model the specific characteristics of the geographical area under study.

Projecte núm.: ALI97-0519-C04-04 (CICYT). Programa nacional de tecnologia d'aliments.

Títol: [Influencia de las variables de proceso en la evolución físico-química de algunos productos cárnicos crudos curados.](#)

Codis UNESCO: 330914.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigadora principal: [ROSSELLÓ MATAS, Carme.](#)

Categoria: TU (àrea de coneixement: Enginyeria Química).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Rosselló Matas, Carme	TU	16
Simal Florindo, Susana	Aj. EU	16
Cañellas Mut, Jaume	As.	16
Barrio Terol, Javier	As.	16
Frau Caldentey, Miquel Àngel		
Torres Oliver, Antònia Maria		

Nombre d'investigadors de la UIB: 4.

Total EJC/setmana: 1,6.

Summary

Keywords: dried cured ham, dried cured loin, sobrasada, processes, diffusion, drying.

The main objective of this work is to establish the relationship between the process variables and some cured meat products evolution. The process variables considered will be room moisture and temperature, the raw material characteristics being maintained constants as well as air velocity. The products to be studied include: dried cured ham, dried cured loin and sobrasada. The engineering approach to the problem will include studying the general components characteristics (fat from different origin and meat from different muscles, chopped or not), as well as the additional mass transfer resistance due to casing in sobrasada and dured loin. For intermuscular mass transfer the effect of connective tissue will be considered. Modelling will be carried out from this general components. Given that the products under consideration suffer a noticeable shrinkage and/or show an irregular shape, it will be necessary to use numerical techniques, nevertheless analytical solutions will be used when studying the general components processed under regular shapes. The evolution of the products will be established experimentally and related, through the models, to process variables. This relationship will be established at both laboratory and pilot scale. A quality assessment of the products will be carried out by sensory analysis as well as standard analytical procedures (chemical, physical and microbiological). For the sensory analysis an evaluation systems based on reference scales will be set up. The potential use of the results will be on the improvement of the control in the curing chambers due to the qualification of the influence on the product of the operating variables thus obtaining a better and more homogeneous quality of the products.

Projecte núm.: PB97-0147 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Preparación y caracterización de óxidos metálicos de porosidad controlada.

Codis UNESCO: 221001.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: OTERO AREAN, Carlos.

Categoria: TU (àrea de coneixement: Química Inorgànica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Otero Arean, Carlos	CU	32
Peñarroya Mentrut, Margarita	Aj. EU	32

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 1,6.

Summary

Keywords: metal oxides, porosity, sol-gel, liposomes, nanostructures.

Methods for preparing monodispersed sub-micron spheres of metal oxides (ZrO_2 , Al_2O_3 , spinels, etc.) will be studied: particle size should be variable according to the specific preparation. Procedures will involve controlled hydrolysis and polymerization of metal alkaloides, and preparation inside liposomes. Obtained and characterized these materials, optimum conditions for incipient sintering will be studied. This sintering process should lead to formation of porous materials where pore size and topology can be conveniently controlled.

Projecte núm.: PM97-0040 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Estudios sobre litiasis renal: mecanismos de formación de cálculos.

Codis UNESCO: 230132.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: GRASES FREIXEDAS, Felicià.

Categoria: CU (àrea de coneixement: Química Analítica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Grases Freixedas, Felicià	CU	32
March Isern, Joan Gabriel	TU	32
Costa Bauzà, Antònia	TEU	32
Bassa Malondra, Antoni	As.	16
Conte Visus, Antoni		16
Ramis Barceló, Margalida		16
García González, Ramón		16
Payeras Cifre, Antoni		16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 2,8.

Summary

Keywords: crystallization, urolithogenesis.

A main objective of the present project is the study of the early stages of stone formation. For this purpose, new "in vitro" methodologies with use of alive renal animal tissues will be developed. With such studies it could be obtained important data about the cell action in the renal calculi development. The experience of the Group permits to pursue the obtention of effective therapeutic solutions for treatment and prevention of this disease. This, the actual studies performed by the Group have clearly demonstrated the exceptional inhibitory capacity that phytic acid exert on calcium oxalate and calcium phosphates crystallization, being such inhibitory capacity increased by the presence of Zn(II), and acting Vitamin A as inhibitor of the enzymes that metabolizes the phytic acid. For this reason we expect to deep into the study of the "in vivo" effects of mixtures phytic acid/Vitamin A/Zn(II), specially the relation between the Vitamin A consumption and the phytic acid excretion. Other objectives of this Project are the development of new analytical procedures in the "kit" form, to apply to the evaluation of important lithogenic parameters such as the urinary crystallization inhibitory capacity of urinary phytic acid concentration. Finally, a study of the calculogenesis induced by Indinavir (drug used in the pharmacological treatment of AIDS) will be performed, with the aim to find possible solutions of this problem.

Projecte núm.: PB98-0129 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Estudios en química supramolecular: reconocimiento molecular, quimiosensores y autoensamblaje.

Codis UNESCO: 23061.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: BALLESTER BALAGUER, Pau.

Categoria: TU (Química Orgànica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Ballester Balaguer, Pau	TU	32
Costa Torres, Antoni	TU	32
Morey Salvà, Jeroni	TU	32
Deyà Serra, Pere M.	CU	32
Quiñonero Santiago, David	B	40
Prohens López, Rafel	B	40

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 5,2.

Summary

Keywords: molecular recognition, host-guest chemistry, guanidinium salts, squaramides, receptors, self-assembly, porphyrins, anion recognition.

In this research project we propose the synthesis and the study of abiotic receptors active in highly competitive solvents. The receptors will be prepared following a modular strategy and using charged interactions centers (guanidinium salts and squaramides) which will allow to establish simultaneously electrostatic and hydrogen bonding interactions with the substrate in order to compete with the solvating power of the solvent. These and other receptors developed by us will be used in conjunction with a signaling group (fluorescent) as the critical components in the development of new chemosensors. The utility of these chemosensors in the signaling and quantification of organic substrates and biologically relevant molecules will also be studied. We also propose the synthesis of giant acrobicyclic hosts, soluble in polar and non-polar solvents, having "box" like structures and featuring an enormous interior cavity, and the study of its complexation processes with organic guests. The self-assembly process of suitable tris-porphyrins leading to box "like" supramolecular assemblies will be investigated, as well as, its structures and functionality as an alternative to the previous covalent approach.

Projecte núm.: PB98-0123 (DGESIC). Programa sectorial de promoció general del coneixement.

Títol: Complejos de metales de transición con moléculas que presentan actividad biológica y/o farmacológica.

Codis UNESCO: 230307.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: TERRON HOMAR, Àngel.

Categoria: TU (àrea de coneixement: Química Inorgànica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Terron Homar, Àngel	TU	32
Fiol Arbós, Joan Jesús	TU	32
García Raso, Àngel	TU	32
Herrero Aísa, Luis Àngel	As.	16
Adrover Fiol, Bartomeu		16

Nombre total d'investigadors de la UIB: 4.

Total EJC/setmana: 2,8.

Summary

Keywords: antiviral, schiff bases, nucleosides, nitrogen bases, peptides, metal coordination complexes.

The main purpose of this project is the synthesis of new transition metal complexes with molecules that are known having biological and/or pharmacological activity. The research will be focused in derivatives of oligopeptides, nucleosides or nitrogen bases; in binary or ternary complexes of Schiff bases obtained from salicylidene aldehyde with peptides or amino acids, and in the obtention and study of binary complexes from bases with antiviral activity (acyclovir and others), or antineoplastic properties (thiopurines and others). The pharmacological and mutagenic activity of the complexes obtained will be also studied.

Projecte d'investigació en tecnologies de la informació i de les comunicacions, i en sistemes d'informació geogràfica aplicats a la planificació educativa (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: [Tecnologies de la informació aplicades a l'avaluació de vessaments d'hidrocarburs en el mar Balear.](#)

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: [BERGUEIRO LÓPEZ, José Ramón.](#)

Categoria: TU (àrea de coneixement: Enginyeria Química).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Bergueiro López, José Ramón	TU	20
Lalucat Jo, Jordi	CU	8
Domínguez Laseca, Félix	As.	20
Mayol Cursach, M. Antònia		32
Martí Moreno, Alfons		8
Rallo Guzmán, Marco		8

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 2,4.

Summary

Keywords: information technologies, oil spill, modeling, dispersants, contingency plants.

In accordance with priority subjects of the International Maritime Organization, our proposal was the application of the Information Technologies to Oil Spill Models. The software has to be easy to use by real users. The accuracy of the calculate of Algorithms into Spill Models will be improved. An unique format will be prepared to be used againts an Oil Spill. Finally, we will adapt it to advanced technology (Internet) that allow the instruction and training of personal for an immediate response to the spill.

Projecte d'investigació en tecnologies de la informació i comunicacions, medi ambient, educació i foment (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: Implementació d'un sistema global de vigilància, control i difusió de les dades sobre qualitat de l'aire.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Codis UNESCO: 2301.

Investigador principal: CERDÀ MARTÍN, Víctor.

Categoria: CU (àrea de coneixement: Química Analítica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Cerdà Martín, Víctor	CU	10
Casas Ametller, Montserrat	CU	10
Cladera Forteza, Andreu		40
Mas Torres, Francesca		40
Gómez Benito del Valle, Enrique	As.	15

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 2,87.

Projecte finançat per la CICYT al Centre de Supercomputació de Catalunya (CESCA).

Títol: Estimació de l'aromaticitat en derivats d'àcids oxocarbònics.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: DEYÀ SERRA, Pere M.

Categoria: CU (àrea de coneixement: Química Orgànica).

Membres de l'equip	Categoria
Deyà Serra, Pere M.	CU
Ballester Balaguer, Pau	TU
Costa Torres, Antoni	TU
Frontera Beccaria, Antoni	Contracte de Reincorporació
Quiñonero Santiago, David	B
Suñer Sabater, Guillem A.	

Període del projecte: 1999.2001.

Hores de càlcul: 14.000.

Summary

Keywords: oxocarbon acids, aromaticity, NMR, theoretical studies.

The main purpose of this project is the systematic estimation of aromaticity in oxocarbon acids and derivatives (dianions, amides, esters,...) by means of computational methods. *Ab initio* theoretical methodologies are required to analyse the electronic structures of the different compounds of the oxocarbon series. Energetic (aromatic stabilization energies), structural (nearly equal bond lengths in the ring) and magnetic (magnetic susceptibilities, NCIS: Nucleus-Independent-Chemical-Shift) criteria have to be used to explore the aromatic character of the proposed compounds.

INSTITUT MEDITERRANI D'ESTUDIS AVANÇATS
(IMEDEA)
INSTITUT MIXT CSIC-UIB

- **Física estadística, fenómenos no lineales y sus aplicaciones.** SAN MIGUEL RUIBAL, Maximino
- **Fauna Ibérica IV (Chrysomelidae).** RAMOS SÁNCHEZ, M. Ángeles / PETITPIERRE VALL, Eduard
- **Flora micológica Ibérica III. Hifomicetos acuáticos.** DESCALS CALLISEN, Enric
- **Aspectos reproductivos y optimización del cultivo larvario del denton (*dentex dentex*).**
Subproyecto 1: Estudio de los aspectos reproductivos del denton y aspectos nutricionales de su desarrollo. MORALES-NIN, Beatriz
- **Evaluación de la contribución del programa nacional de tecnología de alimentos a la articulación del sistema alimentario de innovación.** FERNÁNDEZ DE LUCIO, J. L.
- **Biodegradación de compuestos aromáticos; modelo de naftaleno y sus derivados.** LALUCAT JO, Jordi
- **Respuestas de la vid al riego moderado: efectos en los flujos de savia, crecimiento y fotosíntesis, maduración y calidad del fruto.** MEDRANO GIL, Hipólito
- **Variabilidad oceánica de alta frecuencia y sus implicaciones en el transporte de propiedades físicas biológicas.** HERNÁNDEZ GARCÍA, Emilio
- **Factores ecológicos y fisiológicos que influyen en la distribución y abundancia de plantas endémicas amenazadas de las Islas Baleares.** TRAVESET VILAGINÉS, Anna Maria
- **Análisis de la evolución y extinción de *Myotragus balearicus* Bate 1909 (*Artiodactyla: Caprinae*).** ALCOVER TOMÀS, Josep Antoni
- **Gigahertz and picosecond phenomena in semiconductor laser devices.** SAN MIGUEL RUIBAL, Maximino
- **Dinámica no lineal y estocástica en sistemas extendidos.** TORAL GARCÉS, Raúl
- **Oceanografía física y productividad en la confluencia Weddell-Scotia: contribución española al proyecto internacional.** DOVETAIL (E-DOVETAIL). GARCIA LÓPEZ, Marc A
- **Estímulo experimental de la producción antártica costera (ESEPAC).** AGUSTÍ REQUENA, Susana
- **Sistema per a la Gestió de l'Entorn Marí (SIGEMAR).** TINTORÉ SUBIRANA, Joaquim
- **Perturbación modal de diodos láser.** BALLE MONJO, Salvador
- **Development of a programmable photonic sensor for the prevention of risk in companies.** BALLE MONJO, Salvador
- **Dinàmiques no lineals d'autoorganització espai-temporal.** SAN MIGUEL RUIBAL, Maximino

Projecte núm.: PB94-1167 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Física estadística, fenómenos no lineales y sus aplicaciones.

Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger.

Investigador principal: SAN MIGUEL RUIBAL, Maximino.

Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
San Miguel Ruibal, Maximino	CU	32
Toral Garcés, Raúl	CU	12
Hernández García, Emili	TU	16
Piro, Oreste	TU	20
Colet Rafecas, Pere	TU	16
Balle Monjo, Salvador	TU	12
Caselles Costa, Vicent	TU	12

Nombre total d'investigadors de la UIB: 8.

Total EJC/setmana: 4.

Summary

This proposal follows an ongoing line of research on dynamical properties of nonlinear, nonequilibrium systems as well as on the application of basic knowledge on this field to systems of interest in Photonics technology. It also contemplates an open line of research to address the construction of a Statistical Mechanics of spatio-temporal chaos (weak turbulence). Specific objectives to be addressed include the study of non variational aspects of the CGLE, fluctuations in the convective instability, the study of the vectorial CGLE and parametrically forced systems. Among the open questions in the study of spatio-temporal chaos we address the existence and characterization of transitions among disordered phases, universality classes, quantitative measures of spatio-temporal chaos and the stochastic description of collective behavior at large length scales. Among the applications we propose to solve problems of synchronization of lasers, characterization and control of filamentation in broad area semiconductor lasers and dynamics of polarization of the laser electric field.

Projecte núm.: PB95-0235 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Fauna Ibérica IV (Chrysomelidae).

Codis UNESCO: 2401.

Centre: Departament de Biologia-IMEDEA. Edifici Guillem Colom Casanovas.

Investigadora principal: RAMOS SÁNCHEZ, M. Ángeles.

Investigador responsable: PETITPIERRE VALL, Eduard.

Categoria: CU (àrea de coneixement: Genètica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Petitpierre Vall, Eduard	CU	16
Vela López, José Miguel		16

Nombre total d'investigadors de la UIB: 1.

Total EJC/setmana: 0,4.

Summary

Keywords: biodiversity, fauna taxonomy, distribution, data-bank, biodiversity patterns, Iberian Peninsula, Balears.

The general research program *FAUNA IBÉRICA* aims to carry out different studies directed to the acquisition of basic zoological information on animal biodiversity within the Ibero-balearic boundaries. Parallel to this will be the filing and publishing of the data, using classical edition methods as well as electronic means, potentially increasing the scientific quality of taxonomic research. The basic information obtained through this research will allow us, among many other applications, to have a deeper understanding of how biodiversity is distributed and the causes for the patterns observed, as basic elements for the design of consequent conservation strategies. *Fauna Ibérica IV* is the fourth part of this long-term general program, whose definition, objectives and methodology had been approved together with the first project in September 1988 (DGICYT PB87-0397). Once the dynamics of the taxonomic work have considered that the present project should represent the beginning of a new stage. In this phase, added to the continuity of the studies undertaken and the initiation of new ones on many other animal groups, we aim to start processing the information obtained through a Zoological Data Bank, designed within the frame of a Geographical Information System which would optimize its utility and versatility. A team of 104 researchers participate in *Fauna Ibérica IV*.

Projecte núm.: PB95-0129-C03-03 (DGICYT). Programa sectorial de promoció general del coneixement.

Títol: Flora micològica Ibérica III. Hifomicetos acuáticos.

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigador principal del subprojecte: DESCALS CALLISEN, Enric.

Summary

Keywords: fungi, hyphomycetes, aquatic biology, taxonomy, Spain, Portugal, chorology.

A taxonomic and chorological study of microfungi dispersed in continental waters of the ibero-balearic area. The study involves detection and descriptions of spores in stream water and foam, conidial isolation in pure culture, description and illustration (camera lucida drawings and microphotography) of morphological and ontogenic characters, kariology (using fluorescence techniques), completion of life cycles and herbarium preservation. Environmental factors (nuv light and flow conditions) affecting *in vitro* conidial production are also studied.

Projecte núm.: MAR95-1920-C02-01 (CICYT). Programa nacional de ciència i tecnologia marines.

Títol: Aspectos reproductivos y optimización del cultivo larvario del denton (*dentex dentex*). Subproyecto 1: Estudio de los aspectos reproductivos del denton y aspectos nutricionales de su desarrollo.

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: MORALES-NIN, Beatriz.

Membres de l'equip

Mourente, G.

Grau, A. M.

Riera, F.

Massutí, E.

Rodríguez, A.

Summary

Keywords: common dentex, reproduction, larval rearing, larval nutrition/pathology.

Common dentex (*Dentex dentex*) is one of the most promising new species for Mediterranean aquaculture. The success of the preliminary trials carried out in the "Estación de Acuicultura" (Port Andratx, Mallorca) on the reproduction in captivity of this species and its on-growing (1 kg in 23 months) as well as its great quality and high commercial value make this species especially suitable for industrial production. However, its larval rearing still faces several important problems which have to be solved before industrial production is undertaken. The aims of the present investigations are the optimization of the broodstock in captivity and the increase in larval survival in the rearing system. Three different aspects will be studied:

1.- Reproductive aspects: in order to elucidate the reproductive behaviour of this species, histological studies of ovaries of wild individuals during the spawning period (April-May) will be carried out. On the other hand, spawning parameters of cultured specimens (number of eggs, hatching rate, fertility, survival,...) will be studied.

2.- Nutritional aspects throughout development: an estimate of the utilization of endogenous nutrients from the yolk sac which occurs during embryonic and early larval development will be a first approach to study the nutritional requirements of the larvae. The determinations of the requirements in (n-3)HUFA will be performed by using emulsions, containing different levels of these essential fatty acids, as enhancers for the live preys previous to weaning.

3.- Morphological aspects of the development of the embryo and larvae: in order to determine the causes of the high mortality rate during larval rearing, histological and histopathological events throughout development will be studied. Morphological, morphometrical as well as organ and tissues of the larvae will be carried out in relation to the diet administered.

Projecte núm.: SEC96-0673 (CICYT). Pla nacional d'estudis socials i econòmics.

Títol: Evaluación de la contribución del programa nacional de tecnología de alimentos a la articulación del sistema alimentario de innovación.

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigador principal: FERNÁNDEZ DE LUCIO, J. L.

Investigador de l'IMEDEA: TORTOSA MARTORELL, Enric.

Membres de l'equip

Insúa, Paloma.

Summary

Keywords: programes evaluation, scientific policy evaluation, linking movements.

The general aim of project is to assess the contribution of the National Food Technology Programme of the R&D National Plan to the "articulation" of the Spanish Innovation System in the field of the food sector. For that purpose some innovation inputs and outputs indicators will be taken into account. In particular, those indicators concerning the links setup between public research centres, technology centres and firms as a consequence of the Programme's actions implemented since 1988 will be analysed. Research topics developed under any of the Programme's schemes (R&D projects, both national and european; PETRI scheme projects; "concerted" projects, financial support to technical centres, research training grants, etc.) will be compared to those supported by other industry oriented national Government programmes such as PATI, CDTI or industrial european Programmes of the EU R&D Framework Programme.

Projecte núm.: BIO97-0639. Programa nacional de biotecnologia.

Títol: Biodegradación de compuestos aromáticos; modelo de naftaleno y sus derivados.

Centre: Departament de Biologia-IMEDEA.Edifici Guillem Colom Casasnovas.

Investigador principal: LALUCAT JO, Jordi.

Categoria: CU (àrea de coneixement: Microbiologia).

Membres de l'equip	Categoria
Lalucat Jo, Jordi	CU
Bergueiro López, José Ramón	TU
Bosch Zaragoza, Rafael	Aj. U
García-Valdés Pukkits, Elena	TU
Rosselló Mora, Ramon	As.

Nombre total d'investigadors de la UIB: 5.

Summary

Keywords: biodegradation, naphthalene, pollutants, *pseudomonas*.

Aerobic naphthalene mineralization by *Pseudomonas stutzeri* AN 10 will be studied by using biochemical and genetical tools. These genes are chromosomally encoded and sufficiently distant (biochemically and genetically) from those already described in other bacteria. Main objectives of the project are: 1) Sequencing and evolutive analysis of the complete naphthalene pathway (*nah* and *sal* operons) of *Pseudomonas stutzeri* AN 10. 2) Characterization of the enzymes involved in the degradation, specially when using methylated and halogenated substrates. 3) Improving the degradative capabilities by genetic manipulation of key enzymes in the pathway. 4) Study of chromosomal rearrangements when the strains are adapted to toxic xenobiotic compounds, like 4-chlorosalicylate. 5) Characterization of the diversity of the naphthalene genes in various types of bacteria (*Pseudomonas*, *Comamonas*, and Gram positives). Results can be useful for bioremediation purposes and for biotransformation of aromatic compounds into commercial products.

Projecte núm.: AGF97-1180. Programa nacional d'investigació i desenvolupament agrari.

Títol: Respuestas de la vid al riego moderado: efectos en los flujos de savia, crecimiento y fotosíntesis, maduración y calidad del fruto.

Codis UNESCO: 310205, 241719.

Centre: Departament de Biologia-IMEDEA. Edifici Guillem Colom Casanovas.

Investigador principal: MEDRANO GIL, Hipólito.

Categoria: CU (àrea de coneixement: Biologia Vegetal).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Medrano Gil, Hipólito	CU	32
Díez Betencourt, Clara	CSIC	20
Tortosa Martorell, Enric	CSIC	20
Escalona Lorenzo, J.	B	40
Flexas Sans, Jaume	B	40

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 1,5.

Summary

Keywords: water defficit, sap flow, photosynthesis, vine, rippening, quality, wine.

Irrigation is becoming to be a common practice in spanish vineyards, and new information is needed on the vine response to drought . The vine response to soil water defficit involve modifications in plant growth patterns, total leaf area, water relations, photosynthesis and assimilate partitioning. These changes have an evident effect on harvest. Water defficit severely reduce the plant production capacity. The new approaches now available to follow sap flow, and growth in to the shoot or whole plant, able to achieve a better understanding of the actual water used by the plant (important for irrigation dosage and schedule), as well as to attain a better understanding of the ecophysiological processes involved in crop yield determination and grape quality.

Projecte núm.: MAR98-0840 (CICYT). Programa nacional de ciència i tecnologia marines.

Títol: Variabilidad oceánica de alta frecuencia y sus implicaciones en el transporte de propiedades físicas biológicas.

Codis UNESCO: 2510.

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA). Edifici Mateu Orfila i Rotger.

Investigador principal: HERNÁNDEZ GARCÍA, Emilio.

Membres de l'equip	Categoria	Dedicació (h/setm.)
Hernández García, Emili	TU	16
Font Ferré, Jordi		16
García Ladona, Emilio		16
Piro, Oreste	TU	16
Parisi Baradad, Vicenç		16

Nombre total d'investigadors de la UIB: 2.

Total EJC/setmana: 0,8.

Summary

Keywords: variability, mesoscale, transport, teledetection, circulation models, stochastic forcings, langrangian measurements.

The main objective of this proposal is the analysis of the effects of high frequency atmospheric forcings on the emergence, persistence, and dynamics of mesoscale ocean structures, and of their consequences on transport phenomena. Special attention will be given to the transport of substances relevant to the dynamics of marine ecosystems such as nutrients or biomass and to the Mediterranean geographic area, Alboran and the Algerian basin in particular. Specifically we sought to apply three methodologies: numerical simulation of circulation models in the presence of several kinds of atmospheric forcing, analysis of lagrangian data obtained from float tracking, and the quantitative use of information obtained by teledetection. This objective is fully contained in the Programa nacional de ciencia y tecnología marianas, both because of the specific subjects considered and because of its applied and interdisciplinary character. Potential benefits include the improvement of modelling and prediction of physico-biological transport processes, and the development of novel techniques for processing and use of satellite data.

Projecte núm.: PB97-1174 (DGES). Programa sectorial de promoció general del coneixement.

Títol: Factores ecológicos y fisiológicos que influyen en la distribución y abundancia de plantas endémicas amenazadas de las Islas Baleares.

Codis UNESCO: 241713-19-03.

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: TRAVESET VILAGINÉS, Anna Maria.

Membres de l'equip

Traveset Vilaginés, Anna Maria

Medrano Gil, Hipólito

Rita Larrucea, Joan

Mus Amésquita, Maurici

Sven Evert Jonasson

Flexas Sans, Jaume

Summary

Keywords: endemic plants, threatened species, plant-animal interactions, photosynthesis, photoinhibition, drought, water stress, reproductive mechanisms, dispersal mechanisms, colonization mechanisms.

The project will examine both ecological and physiological factors that affect the distribution and abundance of a group of plants endemic to the Balearic Islands, and currently with a very restricted distribution (some considered as 'endangered' in the IUCN categories). The main goals of the study are: (1) to evaluate the population structure of the threatened plant species and (2) to determine the relative importance of biotic factors (interactions with animals in the different phases of the plant life cycle -pollination, herbivory and seed dispersal- or interactions with other plants) and of abiotic factors (such as plant responses to soil water deficit, a relevant trait in current mediterranean conditions) to be able to predict the risk of extinction of the threatened or endangered species in their natural habitat.

Projecte núm.: PB97-1173 (DGES). Programa sectorial de promoció general del coneixement.

Títol: *Análisis de la evolución y extinción de Myotragus balearicus Bate 1909 (Artiodactyla: Caprinae).*

Codis UNESCO: 241605.

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigador principal: *ALCOVER TOMÀS, Josep Antoni.*

Membres de l'equip

Alcover Tomàs, Josep Antoni

Guerrero Ayuso, Víctor

Moyà-Solà, Salvador

Summary

Keywords: myotragus, artiodactyla, caprinae, Balearic Islands, human-autochthonous fauna contact, insular evolution.

The first goal of the present project is the study of unknown aspects of the biology and evolution of *Myotragus balearicus* bate 1909, a bizarre dwarf artiodactyle (45 cm height at the shoulders) vanished about 4.200 years ago. We will study its diet, its functional anatomy, the differences between Mallorcan and Menorcan populations, the sexual dimorphism, sex ratio, as well as the heterochronic processes involved on its evolution and the taphonomy of some selected cave deposits. Another question to be studied is the role of *Myotragus* in the insular ecosystems. On the other hand, we will deepen on the study of the contact between the first human settlers and *Myotragus balearicus*.

Projecte núm.: UE96-0030 (DGICYT). Programa de promoció general del coneixement.
Títol: Gigahertz and picosecond phenomena in semiconductor laser devices.
Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).
Investigador principal: SAN MIGUEL RUIBAL, Maximino.
Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

Membres de l'equip	Categoria
San Miguel Ruibal, Maximino	CU
Balle Monjo, Salvador	TU
Hernández García, Emilio	TU
Colet Rafecas, Pere	CC/CSIC

Nombre total d'investigadors de la UIB: 3.

Summary

Keywords: semiconductor laser, photonics, gigahertz, picosecond.

The aim of the present project is the investigation of the ultimate high frequency (HF) and high speed (HS) limits of semiconductor laser devices for advanced communication and information processing.

Projecte núm.: PB97-0141-C02-01-02 (DGES). Programa sectorial de promoció general del coneixement.

Títol: [Dinámica no lineal y estocástica en sistemas extendidos.](#)

Codis UNESCO: 220510.

Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger

Coordinador: [TORAL GARCÉS, Raúl.](#)

Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

Subprojecte 01. Investigador principal: TORAL GARCÉS, Raúl

Membres de l'equip	Categoria	Dedicació (h/setm.)
Toral Garcés, Raúl	CU	20
Mirasso Santos, Claudio Rubén	TU	20
Cartwright, Julyan		40
Sintes Olives, Tomàs	Aj. U	32
Martínez Eguiluz, Víctor	B	40
Mayol Serra, Catalina	B	40

Nombre total d'investigadors de la UIB: 6.

Total EJC/setmana: 4,8.

Subprojecte 02. Investigador principal: [COLET RAFECAS, Pere.](#)

Membres de l'equip	Categoria	Dedicació (h/setm.)
Colet Rafecas, Pere	CC (CSIC)	24
Zimmermann, Martin	B	40
Santagiustina, Marco	C	40

Nombre total d'investgadors de la UIB: 1.

Total EJC/setmana: 1.

Summary

Keywords: non linear dynamics, optical systems, extended systems, stochastic resonance.

The aim of this project is to contribute to the understanding of spatially dependent systems described by equations with nonlinear terms and, that can also contain stochastic terms. Among the many systems where this occurs, we will basically concentrate on the study of optically passive non linear media (kerr medium, optical parametric oscillator, second harmonic generation, etc), noise induced phase transitions (especially the influence of the spacial correlation length of the noise), lasers with transverse and polarization dependence of the electrical field, systems of coupled non linear electronic circuits, stochastic resonance in extended systems (Fitzhugh-Nagumo model of excitability), biological processes (ion transport through membranes), etc. The project uses basically analytical developments and numerical techniques, although we aim to make an effort in the modeling with electronic circuits, and intermediate line between numerical simulations and experiments.

Projecte núm.: ANT96-0866 (CICYT). Programa nacional d'investigació a l'Antàrtida.

Títol: Oceanografía física y productividad en la confluencia Weddell-Scotia: contribución española al proyecto internacional DOVETAIL (E-DOVETAIL).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA). Edifici Mateu Orfila i Rotger.

Investigador principal: GARCIA LÓPEZ, Marc A. (Universitat Politècnica de Catalunya).

Membres de l'equip	Categoria
---------------------------	------------------

García López, Marc A.	
Morales-Nin, Beatriz	
Aristegui Ruíz, Javier	
Estrada Mirayes, Marta	
Pedrós-Alio, Carlos	
Cruzado Alorda, Antonio	
Moreno Castillo, Isabel	CU
Olaizola, Miguel	
Martínez Silvestre, Rosa María	

Summary

Keywords: physical oceanography, primary productivity, phytoplankton, bacterioplankton, meso and macrozooplankton, fish larvae, Weddell-Scotia Confluence, Weddell Sea, Antarctic Peninsula.

It is intended to carry out a multidisciplinary oceanographic study of the physical and chemical characteristics of the Weddell-Scotia Confluence waters including the eastern shelf of the Antarctic Peninsula (Joinville I. sector). A key aim of the study is the identification of the main factors that affect the spatial patterns of the primary and the secondary productions in the targeted region, with an emphasis on the local coastal and frontal zones.

The objectives of the proposed research are closely linked with those of the SO-JGOFS and DOVETAIL international projects. The core of the proposed study is an oceanographic survey to be conducted on board R/V Hespérides during austral summer 97/98. Additional mooring work is envisaged. A period of three years, including preparatory tasks and post-processing of results, is anticipated to reach the proposed objectives.

Project núm.: ANT97-0273. Programa nacional d'investigació a l'Antàrtida.

Títol: Estímulo experimental de la producció antàrtica costera (ESEPAC).

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigadora principal: Agustí Requena, Susana.

Categoria: Científic titular del CSIC.

Membres de l'equip	Categoria
Agustí Requena, Susana	CT (CSIC)
Duarte Quesada, Carlos	PI (CSIC)
Vaqué Vidal, Dolors	CT (CSIC)

Summary

Keywords: antarctic ocean, planktonic production, mesocosms, temporal variability, trophic networks.

Antarctic coastal ecosystems are characterized by a substantial planktonic production, which have an important contribution to the carbon flow in the Southern Ocean and, therefore, its role in the carbon budget of the global ocean. Present knowledge points to the control of coastal planktonic production in Antarctica by biological and physical factors. However, our present knowledge on these control mechanisms is still poor, and we are, as yet, unable to predict the magnitude and fate of Antarctic planktonic production. The different hypotheses on the regulation of the planktonic production in the Antarctic coast must, therefore, be subject to experimental manipulation at a relevant scale, allowing the observation of the entire system. The goal of this project is to conduct the experimental work with mesocosms needed to test the importance of different control mechanisms of Antarctic coastal production, to produce a predictive model, which will be tested against a detailed time series and oceanographic surveys. The model will then be used to estimate the role of Antarctic coastal communities in the flow of carbon in the Antarctic Ocean.

Projecte d'investigació en tecnologies de la informació i de les comunicacions, i en sistemes d'informació geogràfica aplicats a la planificació educativa (Conselleria d'Educació, Cultura i Esports del Govern Balear).

Títol: Sistema per a la Gestió de l'Entorn Marí (SIGEMAR).

Codis UNESCO: 2510.

Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger.

Investigador principal: TINTORÉ SUBIRANA, Joaquim.

Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Tintoré Subirana, Joaquim	TU	10
Monserrat Tomàs, Sebastià	TU	5
Gomis Bosch, Damià	TU	5
Balle Monjo, Salvador	TU	5
Reus Llagostera, Maria Cristina	C	40

Nombre total d'investigadors de la UIB: 5.

Total EJC/setmana: 1,5.

Summary

Keywords: management of marine environment, software tool, information technologies.

SIGEMAR (Marine Environment Management System) is a proposal to develop a project to allow to introduce the new technology management in oceanographic studies and its relation with the marine environment, through a computer tool that uses the communication advances (internet network), that can help and simplify the study of several physic variables and that can be used by any people who work in fields related with the marine research. This tool will permit quickly and easily to obtain graphics representation (simples or complexes) essential for oceanographic researches using several scientific visualisation techniques. All this researches related with sciences and marine technologies have a clearly applied character and have an effect on several sectors (fishing, contamination, shipping...). Therefore, this tool means an advance on the environment knowledge development and it can help to resolve its problems, now that, it helps and completes the researches in these subjects. The group of oceanography has expertise in the subject from its participation in international projects on similar type of problems.

Projecte núm.: TIC98-0418-C05-02 (DGES). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: [Perturbación modal de diodos láser.](#)

Centre: Departament de Física-IMEDEA. Edifici Mateu Orfila i Rotger.

Investigador principal: [BALLE MONJO, Salvador.](#)

Categoria: TU (àrea de coneixement: Física de la Matèria Condensada).

Membres de l'equip	Categoria	Dedicació (h/setm.)
Balle Monjo, Salvador	TU	16
Mirasso Santos, Claudio Rubén	TU	16
Marín Regalado, José M.	Aj. U	16

Nombre total d'investigadors de la UIB: 3.

Total EJC/setmana: 1,2.

Projecte d'investigació en tecnologies de la informació i de les comunicacions.

Títol: [Development of a programmable photonic sensor for the prevention of risk in companies.](#)

Codis UNESCO: 330707.

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA).

Investigador principal: [Balle Monjo, Salvador.](#)

Categoria: TU (àrea de coneixement: Física de la Matèria Condensada).

Membres de l'equip	Categoria
Balle Monjo, Salvador	TU
Mirasso Santos, Claudio Rubén	TU

Projecte núm.: 1997XT 00003. Ajut per al desenvolupament i consolidació de xarxes temàtiques (Generalitat de Catalunya).

Títol: [Dinàmiques no lineals d'autoorganització espai-temporal.](#)

Centre: Institut Mediterrani d'Estudis Avançats (IMEDEA). Edifici Mateu Orfila i Rotger.

Investigador principal: [SAN MIGUEL RUIBAL, Maximino.](#)

Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

Coordinador: F. Sagues (Universitat de Barcelona).

Hi participen: Universitat de Barcelona, Universitat Politècnica de Catalunya, Universitat de Santiago de Compostel·la, Universitat de Friburg, l'Institut d'Estudis Espacials de Catalunya

PROJECTES D'ESTÍMUL A LA TRANSFERÈNCIA DE RESULTATS D'INVESTIGACIÓ (PETRI)

- **Desarrollo de un sistema automático de análisis por inyección secuencial y de metodología analítica para la resolución de problemas de análisis aplicado.** CERDÀ MARTÍN, Víctor
- **Influencia de algunas variables de proceso sobre la calidad de productos derivados de la *Aloe vera*.** ROSSELLÓ MATAS, Carme

Projecte núm.: PTR95-0139-OP (CICYT). Projecte d'Estímul a la Transferència de Resultats d'Investigació (PETRI).

Títol: Desarrollo de un sistema automático de análisis por inyección secuencial y de metodología analítica para la resolución de problemas de análisis aplicado.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigador principal: CERDÀ MARTÍN, Víctor.

Categoria: CU (àrea de coneixement: Química Analítica).

Membres de l'equip	Categoria
Cerdà Martín, Víctor	CU
Cladera Forteza, Andreu	C
Cerdà Lacaci, Amàlia	B

Nombre total d'investigadors de la UIB: 3.

Projecte núm.: PTR95-0203-OP (CICYT). Projecte d'Estímul de la Transferència de Resultats d'Investigació (PETRI).

Títol: Influencia de algunas variables de proceso sobre la calidad de productos derivados de la *Aloe vera*.

Centre: Departament de Química. Edifici Mateu Orfila i Rotger.

Investigadora principal: ROSSELLÓ MATAS, Carme.

Categoria: TU (àrea de coneixement: Enginyeria Química).

Membres de l'equip	Categoria
Roselló Matas, Carme	TU
Simal Florindo, Susana	Aj. EU
Femenia Roig, Antoni	B

Nombre total d'investigadors de la UIB: 3.

PROJECTES D'INFRAESTRUCTURA

Referència: IN96-0070.

Investigador: [Costa Torres, Antoni](#).

Categoria: TU.

Departament: Laboratori d'Anàlisi i Assaig.

Material: Laboratoris de serveis generals.

Referència: IN96-0151.

Investigador: [Luo, Yuhua](#).

Categoria: As. Es.

Departament: Ciències Matemàtiques i Informàtica.

Material: Estació de treball gràfica.

Referència: IN96-0182.

Investigador: [Serra Cifre, Bartomeu](#).

Categoria: CU.

Departament: Servei de Càlcul i Informatització.

Material: Sistema de còpies de seguretat de xarxa multiplataforma.

Referència: IN96-0053.

Investigador: [Costa Torres, Antoni](#)

Categoria: TU.

Departament: Laboratori d'Anàlisi i Assaig.

Material: Espectrofotòmetre ultravioleta, espectrofotòmetre de fluorescència. Cromatògraf HPLC.

Referència: IN96-0055.

Investigador: [Palou Oliver, Andreu](#).

Categoria: CU.

Departament: Biologia Fonamental i Ciències de la Salut.

Material: Ordinadors tipus Macintosh i ordenadors tipus PC equipats amb CD Rom i equip multimèdia. Impresores làser en color.

Referència: IN97-0124.

Investigador: Costa Torres, Antoni.

Categoria: TU.

Departament: Laboratori d'Anàlisi i Assaig.

Material: Màquina d'assajos de tracció, analitzador genètic, microscopi de polarització, microtom criostàtic.

Referència: IN97-0151.

Investigador: [Huguet Rotger, Llorenç](#).

Categoria: CU.

Departament: Servei de Càlcul i Informatització.

Referència: IN97-0457.

Investigador: [Hernández García, Emilio](#).

Categoria: TU.

Departament: IMEDEA.

ACCIONS INTEGRADES

Projecte núm.: HA97-0031.
Acció hispano-alemanya
Investigador principal de la UIB: [Pau Ballester Balaguer](#).
Departament: Química.

Projecte núm.: HB97-0106.
Acció hispano-britànica.
Investigador principal de la UIB: [Pau Ballester Balaguer](#).
Departament: Química.

Projecte núm.: HU97-0005.
Acció hispano-austríaca.
Investigador principal de la UIB: [Feliç Grases Freixedas](#).
Departament: Química.

Projecte núm.: HI98-0018.
Acció hispano-italiana.
Investigador principal de la UIB: [Josep Blat Gimeno](#).
Departament: Ciències Matemàtiques i Informàtica.

Projecte núm.: HA98-0061.
Acció hispano-alemanya.
Investigador principal de la UIB: [F. Xavier Bornas Agustí](#).
Departament: Psicologia.

Projecte núm.: HA98-0029.
Acció hispano-alemanya.
Investigador principal de la UIB: [Claudio Mirasso Santos](#).
Departament: Física.

Projecte núm.: HB98-0010.
Acció hispano-britànica.
Investigador principal de la UIB: [Pau Ballester Balaguer](#).
Departament: Química.

Projecte núm.: HA98-0064.
Acció hispano-alemanya.
Investigador principal de la UIB: [Montserrat Casas Amteller](#).
Departament: Física.

Projecte núm.: HF97-0092.

Acció hispano-francesa

Investigador principal: [Beatriz Morales Nin.](#)

Departament: IMEDEA.

Projecte núm.: S/N.

Cooperació científica amb Iberoamèrica

Investigador principal: [Carlos Duarte Quesada.](#)

Departament: IMEDEA.

ACCIONS ESPECIALS

- **Predicción climática basada en casos compuestos a partir de clasificación en clusters.** RAMIS NOGUERA, Climent
- **Sistema de diseño multipuesto cooperativo 3D para arquitectura (M3D).** LUO, Yuhua
- **Creación de una sección de análisis medioambiental situada en el Laboratorio de Análisis y Ensayos de la Universidad de las Islas Baleares.** GARCIA MORENO, Eugeni
- **Mejora de la infraestructura de comunicaciones informáticas del campus de la UIB.** SERRA CIFRE, Bartomeu Jaume
- **Ayuda complementaria para el proyecto SUCSEDE.** PUIGJANER TREPAT, Ramon
- **10 Congreso Internacional Performance Tools '98.** PUIGJANER TREPAT, Ramon
- **Soporte a la Delegación española en el Foro de Ciencia Global de la OCDE.** GARCIA MORENO, Eugeni
- **INTERMED, estudi interdisciplinar de la mediterrània occidental.** TINTORÉ SUBIRANA, Joaquim
- **Effects of entrophicated seawater on rocky shore ecosystems studied in large littoral mesocosm.** DUARTE QUESADA, Carlos
- **Prediction of the resilience and recovery of distribeb coastal communities in the tropics.** DUARTE QUESADA, Carlos
- **Producción de materia orgánica disuelta en el Atlántico Central: consecuencias para el flujo de carbono.** AGUSTÍ REQUENA, Susana
- **Quantum Optics.** SAN MIGUEL RUIBAL, Maximino

Projecte núm.: CLI98-1177-E (CICYT). Programa nacional d'I+D sobre el clima.

Títol: Predicción climática basada en casos compuestos a partir de clasificación en clusters.

Centre: Departament de Física. Edifici Mateu Orfila i Rotger.

Investigador principal: RAMIS NOGUERA, Climent.

Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Projecte núm.: TIC98-1530-CE (CICYT). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: Sistema de diseño multipuesto cooperativo 3D para arquitectura (M3D).

Centre: Departament de Ciències Matemàtiques i Informàtica. Edifici Anselm Turmeda.

Investigador principal: LUO, Yuhua.

Categoria: AS. ESTR. (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Projecte núm.: AMB98-1206-E (DGES). Programa nacional d'I+D en medi ambient.

Títol: Creación de una sección de análisis medioambiental situada en el Laboratorio de Análisis y Ensayos de la Universidad de las Islas Baleares.

Investigador responsable: GARCIA MORENO, Eugeni.

Categoria: CU (àrea de coneixement: Física Aplicada).

Projecte núm.: TEL98-1207-E (DGES). Programa nacional d'aplicacions i serveis telemàtics.

Títol: Mejora de la infraestructura de comunicaciones informáticas del campus de la UIB.

Investigador responsable: SERRA CIFRE, Bartomeu Jaume.

Categoria: CU (àrea de coneixement: Ciències de la Computació i Intel·ligència Artificial).

Projecte núm.: TIC98-1848-CE (CICYT). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: Ayuda complementaria para el proyecto SUCSEDE.

Investigador responsable: PUIGJANER TREPAT, Ramon.

Categoria: CU (àrea de coneixement: Arquitectura i Tecnologia de Computadors).

Projecte núm.: TIC98-1570-E (CICYT). Programa nacional de tecnologies de la informació i de les comunicacions.

Títol: 10 Congreso Internacional Performance Tools '98.

Investigador responsable: PUIGJANER TREPAT, Ramon.

Categoria: CU (àrea de coneixement: Arquitectura i Tecnologia de Computadors).

Projecte núm.: AE98-0128. Oficina de Ciència i Tecnologia de Presidència del Govern.
Títol: Soporte a la Delegación española en el Foro de Ciencia Global de la OCDE.
Investigador responsable: GARCIA MORENO, Eugeni.
Categoria: CU (àrea de coneixement: Tecnologia Electrònica).

Projecte núm.: MAR98-1353-CE.
Títol: INTERMED, estudi interdisciplinar de la mediterrània occidental.
Centre: IMEDEA.
Investigador responsable: TINTORÉ SUBIRANA, Joaquim
Categoria: TU (àrea de coneixement: Física de la Terra, Astronomia i Astrofísica).

Projecte núm.: MAR98-1591-CE.
Títol: Effects of entrophicated seawater on rocky shore ecosystems studied in large littoral mesocosm.
Centre: IMEDEA.
Investigador responsable: DUARTE QUESADA, Carlos.
Categoria: Professor d'investigació del CSIC.

Projecte núm.: MAR98-1839-CE.
Títol: Prediction of the resilience and recovery of distribeb coastal communities in the tropics.
Centre: IMEDEA.
Investigador responsable: DUARTE QUESADA, Carlos.
Categoria: Professor d'investigació del CSIC.

Projecte núm.: MAR98-1676-E.
Títol: Producción de materia orgánica disuelta en el Atlántico Central: consecuencias para el flujo de carbono.
Centre: IMEDEA.
Investigador responsable: AGUSTÍ REQUENA, Susana.
Categoria: Científic titular del CSIC.

Projecte núm.: CO99-0104.
Títol: Quantum Optics.
Centre: IMEDEA
Investigador responsable: SAN MIGUEL RUIBAL, Maximino.
Categoria: CU (àrea de coneixement: Física de la Matèria Condensada).

PROJECTES DE RECERCA APLICADA I DESENVOLUPAMENT

- **Estudi de la qualitat de les aigües i els sediments del Port d'Andratx en relació amb la possible influència de les activitats del Club de Vela.** PÉREZ DE RADA, Guillem Ramon
- **Processament d'extractes obtinguts a partir de la planta *Aloe vera*.** ROSSELLÓ MATAS, Carme
- **Avaluació contínua de l'aplicació del document únic de programació, Foner II 1994-99- Objectiu 5b) a la CAIB.** BENNÀSAR ROIG, Antoni
- **Suport científicotècnic al Laboratori d'Anàlisi del MICOFB.** COSTA TORRES, Antoni
- **Dinàmica de la platja de Cala Millor.** RODRÍGUEZ PEREA, Antoni
- **Alternatives a la regeneració artificial de la platja de Cala Millor.** RODRÍGUEZ PEREA, Antoni
- **Eficacia y aceptabilidad de 3 dosis de S20098 (1,5 y 50 mg) administradas por vía oral una vez al día durante 4 semanas en 120 pacientes ambulatorios con síndrome de fase retardada. Estudio en doble ciego sobre placebo.** RIAL PLANA, Rubén V.
- **Control i altres estudis de lleixius i detergents.** FORTEZA COLL, Rafel
- **Treball preliminar d'estudi per a la formació i execució de plans de recerca i desenvolupament tecnològic, amb l'aplicació especial de la tecnologia per a la defensa i conservació del medi i el foment de les tecnologies netes, del disseny i de la creativitat tecnològica.** ROIG MUNTANER, Antoni
- **Informe técnico: decodificador analógico Set-Top-Box de NCI.** FEMENIES NADAL, Guillem
- **Programa de vigilancia radiológica ambiental: Red densa.** CASAS AMETLLER, Montserrat
- **Propostes per eliminar el risc d'inundacions a Son Ferrer (Calvià).** SERVERA NICOLAU, Jaume
- **Revegetació de les dunes de Es Trocadors-Es Pujols (Formentera). Tercera fase.** LLORENS GARCIA, Lleonard
- **Atlas de los hábitats naturales y seminaturales de España.** LLORENS GARCIA, Lleonard
- **Realització d'una enquesta sobre els hàbits alimentaris dels estudiants de la Universitat de les Illes Balears.** PALOU OLIVER, Andreu
- **Determinación de técnicas para la purificación de Plomo y el eutéctico Plomo-Bismuto fundidos y diseño conceptual de sistemas de purificación en un amplificador de energía.** BERGUEIRO, José Ramón
- **Estudi damunt les parelles de fet a les Illes Balears.** BALLESTER BRAGUE, Lluís
- **Determinació de conductivitats tèrmiques de blocs de construcció.** CESARI ALIBERCH, Eduard
- **Evaluación de información científica y en la preparación de informes de experto preclínicos de diversos productos.** GARCÍA SEVILLA, Jesús A.
- **Avaluació intermitja de la iniciativa comunitària LEADER II de la Serra de Tramontana, Pla de Mallorca, Menorca, Eivissa i Formentera.** BENNÀSAR ROIG, Antoni

- **Estudi de l'impacte dels tractaments contra la processionària del pi (*Thaumetopoea pityocampa*, Denn. & Schiff.) a Balears.** ALEMANY FERRÀ, Aina i MIRANDA CHUECA, Miguel Ángel
- **Prophylaxis of renal lithiasis induced by Indinavir (MSD 639-GRA2/97).** GRASES FREIXEDAS, Félix
- **Tècniques de Western Blot aplicades a l'avaluació de la termogènesis.** PALOU, Andreu i PICÓ, Catalina
- **Evolució de la cuina pitiüsa al llarg del segle XX (un estudi nutricional).** TUR MARÍ, Josep Antoni
- **Estudi dels hàbits nutricionals dels adolescents de Palma de Mallorca.** BENITO OLIVER, Enric i TUR MARÍ, Josep Antoni
- **Estudi dels hàbits alimentaris de la població universitària de la Comunidad Balear.** GIANOTTI, Margdalena; ROCA, Pilar i PALOU, Andreu
- **Taula Input-Output Balear 1997.** AGUILÓ PÉRE, Eugeni
- **Conversió d'un sistema agrari agrari a agricultura ecològica.** VADELL ADROVER, Jaume
- **Adec. mediambiental 3ra fase. Sum. material didàctic Can Reviu.** OLIVER TROBAT, Miquel
- **Anàlisi necessitats de formació del municipi d'Alcúdia.** SALVÀ MUT, Francesca
- **Anàlisi de fitoplancton 99.** MOYÀ NIELL, Gabriel
- **Assistència tècnica per a l'avaluació final (EX-Posl) Urban.** BALLESTER BRAGE, Lluís
- **Assistència per a l'avaluació externa-Urban.** BALLESTER BRAGE, Lluís
- **Assistència tècnica en l'àmbit de noves tecnologies informàtiques.** VALVERDE GARCIA, Llorenç
- **Avaluació i assistència a la DGTIC.** MASSÓ BENNÀSSAR, Joan
- **Qualitat sensorial de la sobrassada de Mallorca contenint colàgen.** ROSSELLÓ MATAS, Carme
- **Caracterització microbiològica del procés de compostatge.** TINTORÉ SUBIRANA, Joaquim
- **Contr. ident. de bact. a la fermentació làctica.** TORTOSA MARTORELL, Enric
- **Desenvolupament del pla especial de l'Arxiduc Lluís Salvador.** RUÍZ PÉREZ, Maurici
- **Despesa turística 1999.** AGUILÓ PÉREZ, Eugeni
- **Developpement de Modeles Qnap-Ifatec.** PUIGJANER TREPAT, Ramon
- **Digitalització de la Cambra Oficial de Comerç.** MANERA ERBINA, Carles
- **Bases sobre el disseny d'una beguda per a esportistes a partir de l'ametlla.** PONS BIESCAS, Antoni
- **Disseny d'un circuit microelectrònic d'aplicació específica.** SEGURA FUSTER, Jaume
- **Elaboració especificacions CD-ROM.** BORNAS AGUSTÍ, Francesc X.
- **Auditoria social del projecte 'Gaia Vida Nueva' corresponent a la iniciativa comunitària de RR.HH. "Empleo-Integra".** SALVÀ MUT, Francesca
- **Estudi genotípic de la cabre salvatge de Mallorca.** TORTOSA MARTORELL, Enric
- **Estudi de les dunes i zones humides de Campos.** TINTORÉ SUBIRANA, Joaquim
- **Estudi de l'impacte econòmic de l'aeroport de Palma.** SASTRE ALBERT, Francesc
- **Formació i inserció, anàlisi crítica i proposta d'intervenció en el marc del projecte IC 'Urban-El Temple'.** SALVÀ MUT, Francesca

- **Auditoria social del curs ‘Gestió dels residus municipals’ en el marc del projecte Torralba, iniciativa comunitària de RR.HH ‘EMPLEO-YOUTHSTART’.** SALVÀ MUT, Francesca / SUREDA NEGRE, Jaume / CALVO SASTRE, Aina M.
- **Index de preus turístics 1999.** AGUILÓ PÉRE, Eugeni
- **Mallorca Daily Bulletin.** OLIVER CODINA, Gabriel
- **MEDIWEB.** SUREDA NEGRE, Jaume
- **Modelización software MULTIBASE.** PUIGJANER TREPAT, Ramon
- **Estudi comparatiu de processos de deposició galvànica per a l’organització de recobriments metàl·lics en bijuteria.** PONS MORRO, Jaume
- **Perfil sensorial de la sobrassada de Mallorca.** ROSSELLÓ MATAS, Carme
- **Projecte Cornell.** JUANEDA SAMPOL, Nativitat
- **Projecte Migrada-Transtools.** PUIGJANER TREPAT, Ramon
- **Prototip per l’aprenentatge de la llengua catalana.** SERRA CIFRE, Bartomeu Jaume
- **Son Reus-99.** CERDÀ MARTÍN, Víctor
- **Southlanarkshire rural partnership community profiles.** CALVO SASTRE, Aina
- **Xilitla. Una ciudad en la selva.** OLIVER RIBAS, Miquel
- **Recerca en blanquejaments dentals.** PONS BIESCA, Antoni
- **Desenvolupament de noves tecnologies per evitar la decoloració de la sobrassada.** PONS BIESCAS, Antoni
- **Modificación de programa de análisis de imagen de otolitos.** MORALES NIN, Beatriz
- **Col·laboració en l’organització d’activitats relacionades amb la història natural.** ALCOVER, Josep Antoni
- **Excavació de la cova d’es Moro i cova Estreta a Pollença.** ALCOVER, Josep Antoni
- **Estudi de la fauna d’invertebrats de les illes Chafarinas.** ALCOVER, Josep Antoni
- **Estudio de poblaciones de aves marinas en las islas Columbretes y en los islotes de Benidorm.** ORO DE RIVAS, Daniel

Títol: Estudi de la qualitat de les aigües i els sediments del Port d'Andratx en relació amb la possible influència de les activitats del Club de Vela.

Investigador: Guillem Ramon Pérez de Rada.

Departament: Biologia.

Empresa/Administració: Club de Vela Port d'Andratx.

Títol: Processament d'extractes obtinguts a partir de la planta *Aloe vera*.

Investigador: Carme Rosselló Matas.

Departament: Química.

Empresa/Administració: Ingeniería Bioenergética, SL.

Títol: Avaluació contínua de l'aplicació del document únic de programació, Foner II 1994-99-Objectiu 5b) a la CAIB.

Investigador: Antoni Bennàsar Roig.

Departament: Biologia.

Empresa/Administració: Conselleria d'Agricultura, Comerç i Indústria.

Títol: Suport científicotècnic al Laboratori d'Anàlisi del MICOFB.

Investigador: Antoni Costa Torres.

Departament: Serveis Científicotècnics.

Empresa/Administració: Col·legi de Farmacèutics.

Títol: Dinàmica de la platja de Cala Millor.

Investigador: Antoni Rodríguez Perea.

Departament: Ciències de la Terra.

Empresa/Administració: Ajuntament de Sant Llorenç des Cardassar.

Títol: Alternatives a la regeneració artificial de la platja de Cala Millor.

Investigador: Antoni Rodríguez Perea.

Departament: Ciències de la Terra.

Empresa/Administració: Associació Hotelera Badia de Cala Millor.

Títol: Eficacia y aceptabilidad de 3 dosis de S20098 (1,5 y 50 mg) administradas por vía oral una vez al día durante 4 semanas en 120 pacientes ambulatorios con síndrome de fase retardada. Estudio en doble ciego sobre placebo.

Investigador: Rubén V. Rial Planas.

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Laboratorios Servier, SA.

Títol: Control i altres estudis de lleixius i detergents.

Investigador: Rafel Forteza Coll.

Departament: Química.

Empresa/Administració: Associació de Fabricants de Productes Químics de Mallorca.

Títol: Treball preliminar d'estudi per a la formació i execució de plans de recerca i desenvolupament tecnològic, amb l'aplicació especial de la tecnologia per a la defensa i conservació del medi i el foment de les tecnologies netes, del disseny i de la creativitat tecnològica.

Investigador: Antoni Roig Muntaner.

Departament: Química.

Empresa/Administració: Conselleria d'Educació, Cultura i Esports.

Títol: Informe técnico: decodificador analógico Set-Top-Box de NCI.

Investigador: Guillem Femenies Nadal.

Departament: Ciències Matemàtiques i Informàtica.

Empresa/Administració: BITel.

Títol: Programa de vigilancia radiológica ambiental: Red densa.

Investigador: Montserrat Casas Ametller.

Departament: Física.

Empresa/Administració: Consejo de Seguridad Nuclear.

Títol: Propostes per eliminar el risc d'inundacions a Son Ferrer (Calvià).

Investigador: Jaume Servera Nicolau.

Departament: Ciències de la Terra.

Empresa/Administració: Gabinet d'Anàlisi Ambiental i Territorial.

Títol: Revegetació de les dunes de Es Trocadors-Es Pujols (Formentera). Tercera fase.

Investigador: Leonard Llorens Garcia.

Departament: Biologia.

Empresa/Administració: GESA.

Títol: Atlas de los hábitats naturales y seminaturales de España.

Investigador: Leonard Llorens Garcia.

Departament: Biologia.

Empresa/Administració: TRAGSA.

Títol: Realització d'una enquesta sobre els hàbits alimentaris dels estudiants de la Universitat de les Illes Balears.

Investigador: Andreu Palou Oliver.

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Conselleria de Presidència.

Títol: Determinación de técnicas para la purificación de Plomo y el eutéctico Plomo-Bismuto fundidos y diseño conceptual de sistemas de purificación en un amplificador de energía.

Investigador: José Ramón Bergueiro.

Departament: Química.

Empresa/Administració: LAESA.

Títol: Estudi damunt les parelles de fet a les Illes Balears.

Investigador: Lluís Ballester Brague.

Departament: Ciències de l'Educació.

Empresa/Administració: Conselleria de la Funció Pública i Interior.

Títol: Determinació de conductivitats tèrmiques de blocs de construcció.

Investigador: Eduard Cesari Aliberch.

Departament: Física.

Empresa/Administració: Asociación de Fabricantes y Empresas Auxiliares de la Construcción de Baleares.

Títol: Evaluación de información científica y en la preparación de informes de experto preclínicos de diversos productos.

Investigador: Jesús A. García Sevilla.

Departament: Biología.

Empresa/Administració: Lasa Laboratorios.

Títol: Avaluació intermitja de la iniciativa comunitària LEADER II de la Serra de Tramuntana, Pla de Mallorca, Menorca, Eivissa i Formentera.

Investigador: Antoni Bennàsar Roig.

Departament: Biología.

Empresa/Administració: Conselleria d'Agricultura i Indústria.

Títol: Estudi de l'impacte dels tractaments contra la processonària del pi (*Thaumetopoea pityocampa*, Denn. & Schiff.) a Balears

Investigador: Aina Alemany Ferrà i Miguel Ángel Miranda Chueca.

Departament: Biología.

Empresa/Administració: Conselleria d'Economia, Agricultura, Comerç i Indústria.

Títol: Prophylaxis of renal lithiasis induced by Indinavir (MSD 639-GRA2/97).

Investigador: Félix Grases Freixedas.

Departament: Química.

Empresa/Administració: Merck Sharp and Dohme.

Títol: Tècniques de Western Blot aplicades a l'avaluació de la termogènesis.

Investigador: Andreu Palou i Catalina Picó.

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Fundació Bosch i Gimpera.

Títol: Evolució de la cuina pitiüsa al llarg del segle XX (un estudi nutricional).

Investigador: Josep Antoni Tur Marí.

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Consell Insular d'Eivissa i Formentera.

Títol: Evolució de la cuina mallorquina al llarg del segle XX (un estudi nutricional).

Investigador: Josep Antoni Tur Marí.

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Consell Insular de Mallorca.

Títol: Estudi dels hàbits nutricionals dels adolescents de Palma de Mallorca.

Investigador: Enric Benito Oliver i Josep Antoni Tur Marí.

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Ajuntament de Palma de Mallorca.

Títol: Estudi dels hàbits alimentaris de la població universitària de la Comunidad Balear.

Investigador: Magdalena Gianotti, Pilar Roca i Andreu Palou

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Direcció General de Joventut i Família del Govern Balear.

Fundació Universitat-Empresa

Títol: Taula Input-Output Balear 1997.

Investigador: Eugeni Aguiló Pérez.

Departament: Economia i Empresa.

Empresa/Administració: Conselleria d'Economia i Hisenda.

Títol: Conversió d'un sistema agrari agrari a agricultura ecològica.

Investigador: Jaume Vadell Adrover.

Departament: Biologia.

Empresa/Administració: 'Sa Nostra' Caixa de Balears.

Títol: Adec. mediambiental 3ra fase. Sum. material didàctic Can Reviu.

Investigador: Miquel Oliver Trobat.

Departament: Ciències de l'Educació-ICE.

Empresa/Administració: AENA.

Títol: Anàlisi necessitats de formació del municipi d'Alcúdia.

Investigador: Francesca Salvà Mut.

Departament: Ciències de l'Educació.

Empresa/Administració: Formació Recursos Humans, SL.

Títol: Anàlisi de fitoplancton 99.

Investigador: Gabriel Moyà Niell.

Departament: Biologia.

Empresa/Administració: Conselleria d'Agricultura, Comerç i Indústria.

Títol: Assistència tècnica per a l'avaluació final (EX-Posl) Urban.

Investigador: Lluís Ballester Brage.

Departament: Ciències de l'Educació.

Empresa/Administració: Consorci Mirall Palma Centre.

Títol: Assistència per a l'avaluació externa-Urban.

Investigador: Lluís Ballester Brage.

Departament: Ciències de l'Educació.

Empresa/Administració: Consorci Mirall Palma Centre.

Títol: Assistència tècnica en l'àmbit de noves tecnologies informàtiques.

Investigador: Llorenç Valverde Garcia.

Departament: Ciències Matemàtiques i Informàtica.

Empresa/Administració: CECOMASA-LIMIT.

Títol: [Avaluació i assistència a la DGTIC.](#)

Investigador: [Joan Massó Bennàssar.](#)

Departament: Física.

Empresa/Administració: Conselleria d'Hisenda, Pressuposts i Energia.

Títol: [Qualitat sensorial de la sobrassada de Mallorca contenint colàgen.](#)

Investigador: [Carme Rosselló Matas.](#)

Departament: Química.

Empresa/Administració: ORDE.

Títol: [Caracterització microbiològica del procés de compostatge.](#)

Investigador: [Joaquim Tintoré Subirana.](#)

Departament: Física.

Empresa/Administració: TIRME, SA.

Títol: [Contr. ident. de bact. a la fermentació làctica.](#)

Investigador: [Enric Tortosa Martorell.](#)

Departament: IMEDEA.

Empresa/Administració: Purac Bioquímica, SA.

Títol: [Desenvolupament del pla especial de l'Arxiduc Lluís Salvador.](#)

Investigador: [Maurici Ruíz Pérez.](#)

Departament: LSIG.

Empresa/Administració: Consell Insular de Mallorca.

Títol: [Despesa turística 1999.](#)

Investigador: [Eugeni Aguiló Pérez.](#)

Departament: Economia i Empresa.

Empresa/Administració: Conselleria de Turisme / Conselleria d'Economia i Hisenda.

Títol: [Developpement de Modeles Qnap-Ifatec.](#)

Investigador: [Ramon Puigjaner Trepat.](#)

Departament: Ciències Matemàtiques i Informàtica.

Empresa/Administració: IFATEC.

Títol: [Digitalització de la Cambra Oficial de Comerç.](#)

Investigador: [Carles Manera Erbina.](#)

Departament: Economia i Empresa.

Empresa/Administració: Cambra Oficial de Comerç, Indústria i Navegació.

Títol: Bases sobre el disseny d'una beguda per a esportistes a partir de l'ametlla.

Investigador: Antoni Pons Biescas.

Departament: Biologia Fonamental i Ciències de la Salut.

Empresa/Administració: Productors Balears d'Ametlles i Garroves.

Títol: Disseny d'un circuit microelectrònic d'aplicació específica.

Investigador: Jaume Segura Fuster.

Departament: Física.

Empresa/Administració: ROBOT, SA.

Títol: Elaboració especificacions CD-ROM.

Investigador: Francesc X. Bornas Agustí.

Departament: Psicologia.

Empresa/Administració: Fundació Balear per a la Prevenció de Riscs.

Títol: Auditoria social del projecte 'Gaia Vida Nueva' corresponent a la iniciativa comunitària de RR.HH. "Empleo-Integra".

Investigador: Francesca Salvà Mut.

Departament: Ciències de l'Educació.

Empresa/Administració: Fundació Deixalles.

Títol: Estudi genotípic de la cabra salvatge de Mallorca.

Investigador: Enric Tortosa Martorell.

Departament: IMEDEA.

Empresa/Administració: PANDION-Frontera i Font, SL.

Títol: Estudi de les dunes i zones humides de Campos.

Investigador: Joaquim Tintoré Subirana.

Departament: Física.

Empresa/Administració: Demarcació de Costes de les Illes Balears.

Títol: Estudi de l'impacte econòmic de l'aeroport de Palma.

Investigador: Francesc Sastre Albertí.

Departament: Economia i Empresa.

Empresa/Administració: AENA.

Títol: Formació i inserció, anàlisi crítica i proposta d'intervenció en el marc del projecte IC 'Urban-El Temple'.

Investigador: Francesca Salvà Mut.

Departament: Ciències de l'Educació.

Empresa/Administració: Consorci Mirall Palma Centre.

Títol: Auditoria social del curs 'Gestió dels residus municipals' en el marc del projecte Torralba, iniciativa comunitària de RR.HH 'EMPLEO-YOUTHSTART'.

Investigador: Francesca Salvà Mut / Jaume Sureda Negre / Aina M. Calvo Sastre.

Departament: Ciències de l'Educació.

Empresa/Administració: Consell Insular de Menorca.

Títol: Index de preus turístics 1999.

Investigador: Eugeni Aguiló Pérez.

Departament: Economia i Empresa.

Empresa/Administració: Conselleria d'Economia i Hisenda / Institut Balear de Promoció del Turisme.

Títol: Mallorca Daily Bulletin.

Investigador: Gabriel Oliver Codina.

Departament: Ciències Matemàtiques i Informàtica.

Empresa/Administració: Mallorca Daily Bulletin, SL.

Títol: MEDIWEB.

Investigador: Jaume Sureda Negre.

Departament: Vicerectorat de Relacions Institucionals i Alumnat.

Empresa/Administració: Caixa de Balears 'Sa Nostra'.

Títol: Modelización software MULTIBASE.

Investigador: Ramon Puigjaner Trepat.

Departament: Ciències Matemàtiques i Informàtica.

Empresa/Administració: Trans TOOLS, SA.

Títol: Estudi comparatiu de processos de deposició galvànica per a l'organització de recobriments metàl·lics en bijuteria.

Investigador: Jaume Pons Morro.

Departament: Física.

Empresa/Administració: Institut Tecnològic de la Bijuteria.

Títol: Perfil sensorial de la sobressada de Mallorca.

Investigador: Carme Rosselló Matas.

Departament: Química.

Empresa/Administració: ORDE.

Títol: Projecte Cornell.

Investigador: C. Nativitat Juaneda Sampol.

Departament: Economia i Empresa.

Empresa/Administració: Sol Melià.

Títol: Projecte Migrada-Transtools.
Investigador: Ramon Puigjaner Trepal.
Departament: Ciències Matemàtiques i Informàtica.
Empresa/Administració: Trans TOOLS, SA.

Títol: Prototip per l'aprenentatge de la llengua catalana.
Investigador: Bartomeu Jaume Serra Cifre.
Departament: Servei de Càlcul i Informatització.
Empresa/Administració: Consorci pel Foment de l'Ús de la Llengua Catalana.

Títol: Son Reus-99.
Investigador: Víctor Cerdà Martín.
Departament: Química.
Empresa/Administració: Consell Insular de Mallorca.

Títol: Southlanarkshire rural partnership community profiles.
Investigador: Aina Calvo Sastre.
Departament: Ciències de l'Educació.
Empresa/Administració: University of Strathclyde.

Títol: Xilitla. Una ciudad en la selva.
Investigador: Miquel Oliver Ribas.
Departament: Servei de Recursos Audiovisuals.
Empresa/Administració: Una y Media Massmedia, SL.

Títol: Recerca en blanquejaments dentals.
Investigador: Antoni Pons Biescas.
Departament: Biologia Fonamental i Ciències de la Salut.
Empresa/Administració: Laboratoris KIN, SA.

Títol: Desenvolupament de noves tecnologies per evitar la decoloració de la sobrassada.
Investigador: Antoni Pons Biescas.
Departament: Biologia Fonamental i Ciències de la Salut.
Empresa/Administració: Francisco Tejedor García, SA / Conselleria d'Agricultura, Comerç i Indústria.

Institut Mediterrani d'Estudis Avançats (IMEDEA)

Títol: [Modificació de programa de anàlisis de imatge de otolitos.](#)

Investigador: [Beatriz Morales Nin.](#)

Departament: IMEDEA.

Empresa/Administració: INFAIMON, SL.

Títol: [Col·laboració en l'organització d'activitats relacionades amb la història natural.](#)

Investigador: [Josep Antoni Alcover.](#)

Departament: IMEDEA.

Empresa/Administració: Societat d'Història Natural de les Balears.

Títol: [Excavació de la cova d'es Moro i cova Estreta a Pollença.](#)

Investigador: Josep Antoni Alcover.

Departament: IMEDEA.

Empresa/Administració: Consell Insular de Mallorca.

Títol: [Estudi de la fauna d'invertebrats de les illes Chafarinas.](#)

Investigador: Josep Antoni Alcover.

Departament: IMEDEA.

Empresa/Administració: Secretaria General de Medio Ambiente. Parques Nacionales.

Títol: [Estudio de poblaciones de aves marinas en las islas Columbretes y en los islotes de Benidorm.](#)

Investigador: [Daniel Oro de Rivas.](#)

Departament: IMEDEA.

Empresa/Administració: Generalitat Valenciana.

ÍNDEX D'INVESTIGADORS

(Investigadors principals, en negreta, en blau i vermell)

Abelló Güell, Teresa	93
Adame Obrador, Teresa	78
Adell Segura, Jordi	79
Adrover Fiol, Bartomeu	190
Aguilar Martínez, Alicia	59
Aguiló Pérez, Eugeni	131, 133, 235, 236, 238
Aguiló Pons, Isabel Maria	97
Aguiló Segura, Paula Maria	133
Aguiló Tarrugí, Dolors	77
Agustí Garcia-Navarro, Àlvar	116
Agustí Requena, Susana	210, 228
Alavedra Castellví, Anna	135
Alberich Martí, Ricard	103
Albertí Serrano, Sebastià	58
Alcántara Escolano, Vicente	135
Alcover Garau, Guillem	122, 123
Alcover Tomàs, Josep Antoni	206, 240
Alemaný Ferrà, Aina	60, 233
Alemaný Hormaeche, Margalida	132
Alemaný Mandilego, Gaspar	68
Alonso Espinosa, Francisco	123
Alperi Pajares, Susana	67
Álvarez Díaz, Dolores	51
Álvarez Vineut, José Federico	165
Amengual Colom, Antoni	149, 157, 159
Aramburu-Zabala, Francisco Javier	83
Aranaz Andrés, Jesús	175
Arce Fernández, Ramón	174
Aristegui Ruíz, Javier	209
Arregui Uribe-Etxeberria, Iñigo	152
Artigues Bonet, Antoni A.	113
Bacaria Colom, Jordi	135
Balaguer Covas, Jaume	69
Balle Monjo, Salvador	42, 43, 161, 197, 207, 211, 212
Ballester Balaguer, Pau	179, 181, 189, 193, 223
Ballester Brague, Lluís	75, 233, 235
Ballester Mortes, Josep Lluís	152
Ballester Nicolau, Coloma	108
Barbe Illa, Ferran	167
Barceló Crespi, Maria	91
Barceló Mairata, Francesca	51
Barea Roig, Rafel	160
Barrio Terol, Javier	183, 186
Bassa Malondra, Antoni	188
Batalla Villanueva, Ramon J.	117
Bateman Pinzón, Allen	117
Bauzá de Mirabó, Francesca	159

Bauzà Sampol, Antoni	78
Bellver Tolrà, Antoni Josep	79
Benedí Benito, Vicente Javier	51, 58, 59
Benito Oliver, Enric	71, 234
Bennàsar Roig, Antoni	53, 231, 233
Bergueiro López, José Ramón	185, 191, 202, 233
Bernal Garcias, Fernando	160
Bernat Nicolau, Guillem	98, 101, 110
Bernat Vistarini, Antonio	140, 141
Bibiloni Coll, Antoni	99, 106
Binimelis Sebastián, Jaume	76, 113
Blanco Gómez, Emilio	141
Blanes Cristóbal, Vicente	135
Blas Guasp, Javier	122
Blat Gimeno, Josep	223
Blázquez Salom, Macià	113
Bona Garcia, Carles	154
Bonet Piña, M. Lluïsa	69
Bornas Agustí, Francesc X.	171, 173, 223, 237
Bosch Artigues, Margalida	167
Bosch Fiol, Esperança	172
Bosch Juan, M. Carme	141
Bosch Zaragoza, Rafael	202
Brage González, Javier	141
Brunet Estarellas, Pere Joan	113
Buades Crespí, Joan	77
Buades Juan, Josep Maria	88
Bujosa Homar, Francesc	102
Busom Piquer, Isabel	135
Cabot Bibiloni, Catalina	53
Cajal Blasco, Berta	174
Calveras Maristany, Aleix	132
Calvet Rovira, Francesc	115
Calvo Sánchez, Tomasa	100
Calvo Sastre, Aina M.	238, 239
Calvo Trias, Manuel	83
Canet Estelrich, Pere	100
Canosa Hermida, Begoña	141
Cantarellas Camps, Catalina	92
Cantó Sánchez, Olga	135
Cañellas Dols, Francesca	68
Cañellas Mut, Jaume	183, 186
Capó Cañellas, Magdalena	182
Carbonell Huguet, Marc	100
Carbonero Gamundí, M. Antònia	145
Caro Fernández, Arturo	184
Carot Giner, Jaume Jesús	154
Carrasco Martorell, Loren	104, 109
Carrera Lamarca, Miguel	166

Cartwright, Julyan	208
Casals Pedreño, Jerònima	183
Casas Ametller, Montserrat	43, 150, 156, 192, 223, 232
Casassas Ymbert, Jordi	93
Caselles Costa, Vicent	23, 108, 197
Casero Martínez, Antonio	78
Castejón Ortega, José	175
Castel Sánchez, Juan Ramón	63
Castellví Sentís, Francesc	117
Castro Hernández, José Juan	55
Castro Ocón, José Aurelio	52, 54
Castro Valdomar, M. Jesús	88
Catalán Fernández, Albert	76
Catalán García, Francisco	63
Catany Escandell, Miquel	76
Cateura Bennàsser, Pau	85
Cavanillas Múgica, Santiago	30, 124
Cebolla Rosell, Vicente	63
Cerdà Lacaci, Amàlia	215
Cerdà Martín, Víctor	184, 192, 215, 239
Cesari Aliberch, Eduard	16, 149, 157, 159, 233
Checa González, Antonio Gerardo	64
Chirivella Romero, Camilo	63
Cifuentes Luna, Carmen	165
Cladera Forteza, Andreu	192, 215
Cladera Munar, Magdalena	134
Clar Matheu, Albert	106
Clavero Gomila, Javier	134
Coca Payeras, Miquel	121
Colet Rafecas, Pere	197, 207, 208
Coll Conesa, Jaume	83
Coll Marí, Lucas	153
Coll Monserrat, Josep	55
Coll Parets, Miquel	180
Coll Sabrafin, Glòria	181
Coll Vicens, Bartomeu	108
Colom Bauzà, Joana	78
Colom, Miquel	184
Company Bauzà, Rosa	165
Conte Visus, Antoni	188
Contijoch Sanahuja, Teresa	79
Costa Bauzà, Antònia	188
Costa Ribas, Benjamí	83
Costa Ruibal, Òscar	93
Costa Torres, Antoni	179, 180, 189, 193, 219, 231
Crespí Bestard, Catalina	69
Crespí Rotger, Sebastià	69
Cruzado Alorda, Antonio	209
De Benito Crossetti, Carol	155

De la Fuente Carrillo, Concepción	165
De la Iglesia Mayol, Begoña	78
Descals Callisen, Enric	199
Deyà Bauzà, Miquel	87
Deyà Serra, Pere M.	179, 181, 189, 193
Díez Betencourt, Clara	203
Dols Company, Francesca	77
Domínguez Laseca, Félix	185, 191
Donoso Pardo, Josefa	180
Duarte Quesada, Carlos	39, 40, 210, 224, 228
Durà Blasco, Antoni	60
Duran Pastor, Miquel	88
Erice Ruiz, M. Carmen	153
Escalona Lorenzo, J.	203
Esteban Valdés, Susana	49, 67
Estella Escudero, Juana	153
Estrada Mirayes, Marta	209
Falero Folgoso, Francisco José	92
Far Sánchez, Maria	159
Farias Batlle, Mercedes	123
Feijoo Iglesias, María Belén	165
Femenia Roig, Antoni	215
Femenies Nadal, Guillem	104, 109, 232
Fernández Bennàssar, M. Carme	102, 153
Fernández Coca, Antonio	140
Fernández Coll, Cristina	174
Fernández de Lucio, J. L.	201
Fernández Tomás, Antonio	128
Ferrà Coll, Patrícia	75
Ferrer Gili, Mateu S.	97
Ferrer Gomila, Josep Lluís	98, 104, 109, 122
Ferrer Pérez, Victòria Aurora	172, 174, 175
Ferrer Talón, Pedro	63
Ferrer Vanrell, M. Pilar	121
Fiol Arbós, Joan Jesús	190
Fiol Roig, Gabriel	97
Flexas Sans, Jaume	203, 205
Font Ferrer, Joan	149, 157
Font Ferré, Jordi	204
Fontanet Nadal, Gabriel	101, 106
Forcada Barona, Ignacio	128
Fornós Astó, Joan Josep	33, 116
Forteza Coll, Rafel A.	159, 184, 231
Frau Caldentey, Miquel Àngel	183, 186
Frau Munar, Joan	180
Frau Rotger, Elisabet	54
Frontera Beccaria, Antoni	193
Fullana Puigserver, Pere	89
Furió Caldentey, Ignasi	104, 109

Fuster Culebras, Julio	134
Fuster Parra, M. Pilar	97, 101
Gairin Sallan, Joaquín	79
Galiana Lopera, Domingo	175
Gállego Castejón, Luis	64
Galli, Ricardo Adolfo	99
Galmés Obrador, Sebastià	105
Gambús Sáiz, Mercè	86
Gamundí Gamundí, Antoni	68
Garau Amengual, Jaume	139
García Arranz, José Julio	141
Garcia Buades, M. Esther	172, 174
Garcia Canals, Núria	124
García Carpintero, Custodia	165
García Charton, José Antonio	55
García de la Banda García, Gloria	171, 173
García Fallos, P.	61
García García, Celso	116, 117
García González, Ramón	188
García Ladona, Emilio	204
García López, Marc A.	57, 209
Garcia Mas, Alexandre	165
Garcia Moreno, Eugeni	9, 11, 151, 155, 158, 227, 228
Garcia Palmer, Fco. José	69, 166
García Raso, Ángel	190
Garcia Sevilla, Jesús Andrés	49, 233
Garcia Solé, Marc	127
García-Valdés Pukkits, Elena	202
Garcias Gomila, Francesca	150, 156
Garcias Salom, Miquel Àngel	105
Garín, Claudia Fabiana	50
Garnería Pico, Irene	50
Gelabert Ferrer, Bernadí	116
Genestar Julià, Catalina	86
Ghanime Rodríguez, Alberto	93
Gianotti Bauzà, Magdalena	69, 234
Gil Sánchez, José	51
Gili Planas, Margalida	172, 174
Giménez García, Jorge	116
Ginard Bujosa, Antoni	113
Ginés Gracia, Joaquín	116
Gómez Benito del Valle, Enrique	184, 192
Gómez Gras, José M.	175
Gómez-Zurita Frau, Jesús	50
Gomila Benejam, Josep	77
Gomila Salas, Joan	60
Gomis Bosch, Damià	14, 211
González Hidalgo, Manuel	106
González Muñoz, Fernando	141

González Soto, Ángel	79
Grases Freixedas, Felicià	188, 223, 233
Grau, A. M.	200
Grimaldos García, Isabel	123
Grimalt Gelabert, Miquel	114
Güell Ivern, Maria	79
Guerrero Ayuso, Víctor Manuel	83, 206
Haba Ejarque, Manuel	63
Haroun Tabraue, Ricardo Jesús	55
Hernández Allés, Santiago	51
Hernández García, Emilio	197, 204, 207, 220
Herrero Aísa, Luis Àngel	190
Hierro Riu, Ferran	149, 157
Homar Borràs, Francesc	165
Huesa Vinaixa, Rosario	128
Huguet Rotger, Llorenç	101, 104, 109, 122, 219
Ignacio García, Emilio	175
Insúa, Paloma	201
Iñíguez Nicolau, Benjamín	151
Isern Riutort, Eugeni M.	151, 155, 158
Jiménez Jiménez, Bonifacio	79
Juan Vidal, Josep	87
Juaneda Sampol, Catalina N.	131, 133, 134, 238
Juíz García, Carlos	101, 105
Laita Ruiz de Asua, M. Mercedes	114
Lalucat Jo, Jordi	57, 185, 191, 202
Lamarca Ruíz de Eguilaz, Rafael	141
Llabrés Bernat, Antònia	76
Llabrés Bordoy, Jordi	171, 173
Llabrés Segura, Mercè	103
Lladó Pol, Francesca	92
Lladó Sampol, Isabel	69
Llamosí Casas, Albert	101, 110
Llauger Rosselló, Joan Antoni	76
Llinàs Martí, Antoni	180
Llinàs Servera, Joan	165
Llobera Cànaves, Joan	134, 165
Llorens Garcia, Leonard	53, 232
Llorens Vila, Jordi	93
Llull Gilet, Antoni	133
Llull Sarralde, Micaela	165
Lopes Romano, Anabela M.	28
López García, Miguel Àngel	135
López García, Salvador	135
López Poza, Sagrario	141
López Roig, Sofía	175
López Simó, Francisco	123
Lorenzo Martínez, Susana	175
Lozano Arnica, Gonzalo	132

Luca de Tena Bethencourt, M. del C.	78
Luján López, José Luís	34
Luo, Yuhua	25, 99, 219, 227
Madroñal Durán, Abraham	139
Manassero Mas, M. Antònia	172, 174 , 175
Manera Erbina, Carles	236
Mañas Florit, Josep	105
March Cerdà, Martí Xavier	75, 76
March Isern, Joan Gabriel	188
Marcos Diego, Concepción	55
Marimon Riutort, Antoni	88, 93
Marín Gelabert, Miquel	102
Marín Regalado, José M.	212
Martí Moreno, Alfons	191
Martín Martín, M. Vega	134
Martín Montes, Dolors	77
Martín Vide, Juan Pedro	117
Martínez Cañellas, Anselm M.	123
Martínez Eguiluz, Víctor	208
Martínez Juan, Joana	77
Martínez Nadal, Apol·lònia	121, 122 , 123
Martínez Silvestre, Rosa María	209
Martínez Taberner, Antoni	56
Martínez-Abascal García, Ángeles	171, 173
Mas Franch, Lluís	154
Mas Grimalt, Margarida	100
Mas Hernández, Julio	55
Mas Pichaco, Antònia	101, 106
Mas Sansó, Ramon	99
Mas Torres, Francesca	192
Mascaró Oliver, Miquel	106
Mascaró Portells, Miquel	99, 106
Massó Bennàssar, Joan	154, 236
Massutí, E.	200
Matamoros Florí, Núria	69
Mateos Ruiz, Rosa María	115
Maura Arbós, Maria	165
Mayó Bennàssar, Pere	77
Mayol Cursach, M. Antònia	191
Mayol Serra, Catalina	208
Mayor Forteza, Gaspar	100
Medrano Gil, Hipólito	28, 29, 57 , 61, 63, 203 , 205
Mercader Prats, Magdalena	135
Merino Montero, Susana	58, 59
Mesquida Mas, Mateu	134
Mir Torres, Arnau	99
Mira Solves, José Joaquín	175
Miralles Socias, Antoni	49
Miranda Chueca, Miguel Ángel	60, 233

Mirasso Santos, Claudio	208, 212, 223
Miró Julià, Josep J. A.	98
Miró Julià, Margalida	97
Miró Martínez, Jordi	173
Moll Blanes, Isabel	89 , 102
Moll, Joana Maria	183
Monserrat Antich, Miquel	103
Monserrat Tomàs, Sebastià	210
Monterrubio Prieto, Juan Miguel	139
Montón Costero, José Antonio	76
Morales Correas, Nuria	185
Morales Nin, Beatriz	35, 36, 37, 38, 42, 200 , 209, 224, 240
Moreno Castillo, Isabel	55 , 209
Morey Salvà, Jeroni	181, 189
Morlà Garcias, M. Miquela	78, 79
Mourente, G.	200
Moyà Niell, Gabriel	56, 235
Moyà-Solà, Salvado	206
Mulet Gutiérrez, Maria José	92
Munar Bernat, Pedro A.	121
Muniesa Brito, Bernardo	93
Muntasell Pla, Joaquim	149, 157
Muñoz Izquierdo, Francisco	180
Muñoz Vidal, Araceli	167
Mus Amésquita, Maurici	205
Mut Puigserver, Macià	104, 109
Nadal Gómez, Irene	123
Navarro Serrano, Magdalena	165
Negre Bennàsar, Francesca	78
Nicolás Orejas, Gabriela Noemí	71
Nicolau Llobera, Cristina	68
Nicolau Riutort, Antoni	165
Niñerola Chifoni, Daniel	117
Nogueras Mas, María Mercedes	59
Olaizola, Miguel	209
Oliver Barceló, Santiago	123
Oliver Capó, Gabriel	54
Oliver Codina, Gabriel	106, 110, 238
Oliver Herrero, Ramon	152
Oliver Oliver, Jordi	27 , 69
Oliver Ribas, Miquel	239
Oliver Trobat, Miquel	79, 235
Oliver Vara, Paula	69
Olmos Bonafé, Gabriel	49
Oro de Rivas, Daniel	240
Oromí Masoliver, Pedro	50
Orquiñena Smith, Begoña	76
Orte Socias, M. del Carme	75
Ortega Terol, J. Miguel	128

Ortíz Rodríguez, Alberto	106, 110
Otero Arean, Carlos	187
Ozaita Mintegui, Andrés	49
Pablo Cànaves, Josep Agustí	69
Palmer Pol, Alfons Lluís	174
Palmer Rodríguez, Pedro A.	99, 106
Palou Franco, Josefina	86
Palou Oliver, Andreu	27, 43, 69, 219, 232, 234
Paniza Fullana, Antònia	124
Pardo Pascual, José E.	116
Parisi Baradad, Vicenç	204
Pascual Tortella, Josep	151
Payeras Capellà, M. Magdalena	124
Payeras Cifre, Antoni	165, 188
Pedrós-Alio, Carlos	209
Pena Suciro, Nieves	141
Peñarroya Mentrut, Margarita	187
Perales López, Francisco José	99, 106
Pérez Castelló, Josep Antoni	128
Pérez Garcias, Adolfinia	78, 79
Pérez Pareja, Francisco Javier	171
Pérez-Navarro Gómez, Ángel	185
Pericàs Beltran, Jordi	166, 167
Petitpierre Vall, Eduard	50, 57, 198
Petrus Bey, Joana Maria	31
Pich Mitjana, Josep	93
Picó Segura, Catalina	69, 234
Picornell Alou, Catalina	149, 153, 157, 159
Picornell Rigo, Antònia	52, 54
Picos Gaya, Rodrigo	158
Piro, Oreste	197, 204
Plastino, Ángel	43
Poch Claret, Rosa M.	117
Polo Cantero, José	117
Polvorinos López, María Lourdes	165
Pomar Gomà, Lluís	115
Pomar Reynés, Josep	134
Ponce Alifonso, Carmen	79
Pons Biescas, Antoni	69, 237, 239
Pons Morro, Jaume	149, 157, 159, 238
Pons Pons, Joan	50
Pou Bordoy, Joan	134, 165
Pou Rigo, Antoni	77
Poves Paredes, Javier	79
Prieto Almirall, Rafael María	67, 71
Proenza Arenas, Ana Maria	69
Proenza Arenas, Julián	98, 110
Prohens López, Rafel	189
Prohens Sastre, Rafel	108

Puente Ferrà, Antoni	150, 156
Puig Mojer, Marta Sebastiana	71
Puigjaner Trepat, Ramon	21, 22, 101, 105, 227, 236, 238, 239
Pujadas Martí, Xavier	93
Quetgles Pons, Bartomeu	79
Quevedo Coli, Santiago	69
Quintero Olivares, Gonzalo	127
Quiñonero Santiago, David	189, 193
Rallo Guzmán, Marco	191
Ramis Barceló, Margalida	188
Ramis Noguera, Climent	227
Ramon Juanpere, Misericòrdia	52, 54
Ramon Molinas, Jerònia	76
Ramon Pérez de Rada, Guillem	56, 231
Ramos Morilla, Xavier	135
Ramos Sánchez, M. Ángeles	57, 198
Rayó Amengual, Joana Maria	67
Rayó Ferrer, Miquel	78
Reguè Queralt, Miquel	58, 59
Reig Morro, Antònia	86
Reus Llagostera, Maria Cristina	211
Reus Morro, Jaume	92
Rial Planas, Rubén V.	68, 231
Ribas Núñez, Catalina	49
Ribot Riutort, Joan	69
Riera Font, Antoni	131, 133
Riera Jaume, Melsion	165
Riera Madurell, Teresa	97
Riera, F.	200
Rigo Carratalà, Eduard	78
Rincón Verdadera, Juan Carlos	79
Rita Larrucea, Joan	205
Riutort Serra, Bernat	145
Rivas Yarza, Pedro	132
Roca Adrover, Miquel Jesús	151, 155, 158
Roca Bennàssar, Miquel	165
Roca Sagales, Oriol	135
Roca Salom, M. del Pilar	27, 69
Rocha Cárdenas, Jairo	99, 106
Rodríguez Marín, Jesús	175
Rodríguez Perea, Antoni	116, 231
Rodríguez Rodríguez, Rosa Isabel	78
Rodríguez, A.	200
Roig Muntaner, Antoni	180, 232
Rosell Andreo, Jordi	54
Rosselló Bordoy, Guillem	91
Rosselló Llompart, Francesc A.	103
Rosselló Matas, Carme	20, 183, 186, 215, 231, 236, 238
Rosselló Mora, Ramon	202

Rosselló Nadal, Jaume	131
Rosselló Ramon, Rosa	78
Rosselló Verger, Vicenç M.	116
Rubires Ferrer, Francesc X.	51
Ruíz Pérez, Maurici	76, 113, 114, 236
Rullan Salamanca, Onofre	113
Saá Rodríguez, José Manuel	182
Sainz Gómez, José Antonio	155
Sala Sanjaume, Maria	117
Salas Vives, Pere	89
Salinas Ibáñez, Jesús	78 , 79
Salom Fuster, Marc	78
Salvà Mut, Francesca	79, 235 , 237 , 238
Salvà Tomàs, Pere A.	76, 113
San Miguel Ruibal, Maximino	17 , 41 , 42 , 43 , 161 , 197 , 207 , 212 , 228
Sánchez Legido, Ángel	128
Sánchez Ruiz, Mercedes	123
Sanroma Lucia, Manuel	79
Santacana Torres, Carles	93
Santagiustina, Marco	208
Santamaría Pérez, María Luisa	105
Santamaria Semis, Joan	165
Santamarta Martínez, Rubén	157
Santiago Álvarez, Rosa Araceli	141
Sastre Albertí, Francesc	131, 237
Sastre Moll, Jaume	86
Sastre Sagreras, Maria Magdalena	67
Sauleda Roig, Jaume	166
Sbert Juan, Catalina	108
Seguí Aznar, Miquel	90
Seguí Palmer, M. Concepció	149, 157, 159
Seguí Pons, Joana Maria	76
Segura Beltran, Francesca S.	116
Segura Fuster, Jaume A.	151, 155 , 158, 237
Serra Barceló, Jaume	87
Serra Busquets, Sebastià	77, 88 , 93
Serra Cifre, Bartomeu J.	10 , 105, 153, 219 , 227 , 239
Serra Crespí, Llorenç	150, 156
Serra Vich, Francesca	69
Serrano Mancilla, Alfredo	135
Servera Barceló, Mateu	174
Servera Nicolau, Jaume	116, 232
Servera Rullan, Guillem	98, 105
Simal Florindo, Susana	186, 215
Sintes Olives, Tomàs	208
Sitges Macià, Esther	175
Socias Salvà, Antoni	133
Soto Nieves, Guadalupe	135
Spadaro, Amedeo	18 , 19 , 135

Stela Fiol, Joan	154
Suñer Llabrés, Jaume	100
Suñer Sabater, Guillem A.	181, 193
Sureda Garcia, Bernat	77 , 102
Sureda Garcia, Immaculada	78
Sureda Negre, Jaume	76 , 238
Sven Evert Jonasson	205
Tapia Fernández, Isabel	123
Tarraga Gordiola, Salvador Andreu	166
Terrassa Pont, Bàrbara	52
Terron Homar, Àngel	190
Thomàs Mulet, Vicenç	165
Tintoré Subirana, Joaquim	12 , 15 , 161 , 211 , 228 , 236 , 237
Tirado Bennàsar, M. Dolors	131
Togores Solivellas, Bernat	166
Tomás Magaña, Juan	58 , 59
Toral Garcés, Raúl	197, 208
Torrens Sastre, Joan	103
Torres Esbarranc, Joan Josep	84
Torres Oliver, Antònia Maria	186
Tortella Feliu, Miquel R.	171, 173
Tortosa Martorell, Enric	63, 201 , 203, 236 , 237
Traveset Vilaginés, Anna Maria	205
Tur Faúndez, M. Nélida	124
Tur Marí, Josefina	67
Tur Marí, Josep Antoni	67 , 71 , 234
Ubeda Cartaña, Xavier	117
Urbina Ramírez, Santos	78
Urgell Hernández, Ricard	85
Vadell Adrover, Jaume	235
Vallespir Soler, Jordi	77 , 79
Valverde Garcia, Llorenç	100, 110, 235
Vaqué Vidal, Dolors	210
Vaquer Bennàssar, Onofre	87
Vázquez Alonso, Àngel	153 , 160
Vega Reynés, Manuel	182
Vela López, José Miguel	198
Ventayol Bosch, Pere	49
Vich Botta, Joan	68
Vila Ribas, Maria del Carme	121
Vilanova Canet, Bartomeu	180
Vilar Pérez, María Luisa	77
Vilimelis Montsó, Josefina	69
Villalonga Riera, Concepció	165
Villaverde González, José Manuel	166
Vitaller Burillo, Julián	175
Vivanco, Fernando	58
Yañiz Aguado, Carlos	99, 106
Zimmermann, Martin	208
Zurriaga Llorens, Rosario	175

ÍNDIX D'ABREVIACIONS

Aj. EU: Ajudant/a d'Escola Universitària
Aj. U: Ajudant/a d'Universitat
AGR: Programa nacional d'investigació i desenvolupament agrari
ALI: Programa nacional de tecnologia d'aliments
AMB: Programa nacional d'I+D en medi ambient
ANT: Programa nacional d'investigació a l'Antàrtida.
As.: Associat/da
B: Becari/ària
B (reinc.): Becari/ària postdoctoral de reincorporació
BIO: Programa nacional de biotecnologia
C: Col·laborador/a
CEU: Catedràtic/a d'Escola Universitària
CICYT: Comissió Interministerial de Ciència i Tecnologia
CLI: Programa nacional d'I+D sobre el clima
CSIC: Consell Superior d'Investigacions Científiques
CU: Catedràtic/a d'Universitat
DGICYT: Direcció General d'Investigació Científica i Tècnica
EJC: Equivalents de Jornada Completa
FD: Fondos FEDER
FIS: Fons d'Investigació Sanitària
HID: Programa nacional de recursos hídrics
IMPIVA: Institut per a la Modernització dels Processos Industrials de València
MAR: Programa nacional de ciència i tecnologia marines
MAST: Marine Sciences and Technologies
MAT: Programa nacional de materials
MEC: Ministeri d'Educació i Ciència
PB: Programa bàsic (Programa sectorial de promoció general del coneixement)
PETRI: Projecte d'Estímul a la Transferència de Resultats d'Investigació
PM: Programa de medicina
PS: Programa sectorial
RACE: Research and Technology Development in Advanced Communications Technologies
SC: Programa sectorial d'I+D agrari i alimentari del MAPA
SM: Projecte simplificat d'investigació en biomedicina
Tèc.: Tècnic
TEL: Programa nacional d'aplicacions i serveis telemàtics
TEU: Titular d'Escola Universitària
TIC: Programa nacional de tecnologies de la informació i de les comunicacions
TU: Titular d'Universitat
UE: Unió Europea
UIB: Universitat de les Illes Balears
UNESCO: United Nations Educational Scientific and Cultural Organization