



# UC3M R&D in the area of tourism

IDENTIFICATION  
OF THE RESEARCH  
ACTIVITY,  
TECHNOLOGIES,  
PATENTS,  
INFRASTRUCTURES,  
AND OTHER  
UC3M CAPABILITIES  
IN THE AREA  
OF TOURISM

**uc3m**

Universidad **Carlos III** de Madrid

Vicerrectorado de Política Científica

Servicio de Apoyo al Emprendimiento y la Innovación





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R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
SOCIAL ANALYSIS			
<p><b><u>Work, family and gender</u></b></p> <hr/> <p><b>PI: Constanza Tobío</b></p>	<ul style="list-style-type: none"> <li>• Intergenerational relationships and family networks</li> <li>• Socio-demographic aspects of the family</li> <li>• Employment throughout the lifespan</li> <li>• Caregiving of dependent persons</li> <li>• Active aging</li> <li>• Policy Evaluation</li> </ul>	<p><b>R&amp;D Regional Plan Projects</b></p> <ul style="list-style-type: none"> <li>• ENGAGE-CM – Active Aging, Quality of Life and Gender</li> </ul>	<p><b>Experience and Capabilities</b></p> <ul style="list-style-type: none"> <li>• Sociology of tourism and leisure</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>LIBRARY SCIENCE AND DOCUMENTATION</b>			
<p><b><u>Analysis of Resource Contents for Information Organization and Policies in a Knowledge Society (ACROPOLIS)</u></b></p> <hr/> <p><b>PI: Mercedes Caridad Sebastián</b></p>	<ul style="list-style-type: none"> <li>• Processes of convergence toward the Knowledge Society</li> <li>• Social Inclusion programs and projects</li> <li>• Models for publishing, presenting and managing educational content</li> <li>• Computer literacy skills for the Knowledge Society</li> <li>• Administration and Management Techniques for Libraries and information services</li> <li>• Digital and virtual educational libraries in CRAI and CRA</li> <li>• Development and application of evaluative models for registering the evolution of the Knowledge Society information and educational institutions</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Vocabulary for a File Network and Media Art Collections and their effects: metaliteracy and knowledge tourism</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group is formed by a team of professionals and experts in Information Organization and Policies in the Knowledge Society whose lines of work are focused on knowledge, the development of techniques and resources in the design of Technological Innovation and Information policies and services, as well as the implementation of a suitable methodology for the evaluation of said policies and services.</p> <p><b>Others</b></p> <ul style="list-style-type: none"> <li>• European digital cultural heritage: Europeana (paper)</li> </ul>



R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
PUBLIC LAW			
<p><b><u>Urban Planning and Zoning.</u></b>  <b><u>Environmental Issues – Public Health and Risk Management</u></b></p> <hr/> <p><b>PI: Antonio Descalzo</b>  (Instituto Pascual Madoz)</p>	<ul style="list-style-type: none"> <li>• Territorial and urban planning policy</li> <li>• Territorial and Local Government</li> <li>• Sustainability and the environment</li> <li>• Public policy and governance</li> <li>• Law and the energy market</li> <li>• The European Union environment</li> <li>• Planning, environmental management and climate</li> <li>• Economic Intervention</li> <li>• Mobility planning, accessibility, communications and the information society</li> <li>• Security, sustainability and precaution</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• The law with respect to innovation and risks derived from climate change</li> <li>• The Public Administration with respect to social innovations derived from sustainable urban mobility policies</li> </ul>	<p><b>Experience and Capabilities</b></p> <ul style="list-style-type: none"> <li>• Administrative regulation of tourism</li> <li>• The right to culture and to the enjoyment of cultural heritage</li> </ul>



R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>BUSINESS ECONOMICS</b>			
<p><b><u>Financial Economics</u></b></p> <hr/> <p><b>PI: María Gutiérrez Urtiaga</b></p>	<ul style="list-style-type: none"> <li>• Valuation of Companies</li> <li>• Portfolio selection</li> <li>• Governance of the firm and Corporate Social Responsibility</li> <li>• Banking</li> <li>• Risk management in companies and credit risk</li> <li>• Commodities</li> <li>• Investment Funds</li> <li>• Microstructure of financial markets</li> <li>• Actuarial Research</li> </ul>	<p><b>Private funding</b></p> <ul style="list-style-type: none"> <li>• Capacitation activities for actors involved in the Mostar tourism sector</li> <li>• Development of the First Central American Forum on Rural Tourism.</li> <li>• Providing advice and technical assistance in the area of the Standardisation, Classification, and Quality of Tourism to the Tourism Ministry of Venezuela</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>The group is formed by experts in various areas of finance who work in the frontier of scientific knowledge, publishing in top-tier academic journals, while at the same time imparting highly prestigious finance training programmes, both in English and in Spanish. The group's experts also participate in projects with private enterprises in order to put into practice the latest financial techniques.</p>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>BUSINESS ECONOMICS</b>			
<p><b><u>Company Innovation, Organization and Marketing</u></b></p> <p><b>PI: Isabel Gutiérrez Calderón</b></p>	<ul style="list-style-type: none"> <li>• Innovation, imitation and results of companies</li> <li>• Challenges and opportunities posed by new ways of organizing innovation</li> <li>• Company strategy and sustainable development</li> <li>• Product proliferation and innovation and developing new markets</li> <li>• Competitive dynamics, survival and results</li> <li>• Differences, strategies and results of generalists and specialists</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• The role of the identity of the company, the adaptation process and leadership in the digital society: a multidisciplinary approach</li> <li>• Innovation and Good Governance Strategies for a Sustainable Economy</li> <li>• Data-based analytical marketing techniques</li> <li>• Analytical marketing techniques in data-rich environments</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group provides support and advice to companies and organizations for a better and more appropriate management of their resources, providing guidance on the implementation of effective financial and commercial strategies, and actively contributing to the training of specialized and qualified staff.</p> <ul style="list-style-type: none"> <li>• Managing tourist events and protocol</li> <li>• Managing intermediary companies in the tourism and leisure industry</li> <li>• Digital and social media marketing for tourism products</li> <li>• Operations and processes in tourism companies</li> <li>• Managing the quality of tourism services and customer service</li> <li>• Business administration basics</li> </ul> <p><b>Others</b></p> <ul style="list-style-type: none"> <li>• <i>La diferenciación en el sector hotelero español: la relación entre los tipos de diferenciación y competencia y sus efectos en precios y beneficios</i> (The differentiation in the Spanish hotel sector: the relationship between the types of differentiation and competition and the effects thereof on prices and benefits) (Thesis)</li> </ul>

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BUSINESS ECONOMICS			
<p><u>Company Innovation, Organization and Marketing</u></p> <hr/> <p>PI: Isabel Gutiérrez Calderón</p>			<ul style="list-style-type: none"> <li>• <i>Ética, sostenibilidad y RSC: ¿herramientas del marketing estratégico en los hoteles españoles? In: Responsabilidad social corporativa (RSC): economía colaborativa y cumplimiento normativo.</i> (Ethics, sustainability and CSR: strategic marketing tools in Spanish hotels?. In: Corporate social responsibility (CSR): collaborative economics and regulatory compliance. TIRANT LO BLANCH, S.L</li> <li>• <i>Green Entrepreneurship in Tourism.</i> In: The Emerald Handbook of Entrepreneurship in Tourism, Travel and Hospitality: Skills for Successful Ventures (Book chapter)</li> <li>• <i>Strong shareholders, weak outside investors</i> (Paper)</li> <li>• <i>Clustering benefits for upscale urban hotels</i> (Paper)</li> </ul>



R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>BUSINESS ECONOMICS</b>			
<p><b><u>International Research Circle on Marketing and Company Competitiveness</u></b></p> <p><b>PI: Julio Cerviño, Jaime Rivera</b></p>	<ul style="list-style-type: none"> <li>• Research of international markets</li> <li>• Marketing plans in a national and international context</li> <li>• Design and strategic brand auditing</li> <li>• Auditing, design and implementation of competitive market strategies</li> <li>• Environmental marketing policies</li> <li>• Direct marketing, customer assistance, and Relationship Marketing</li> <li>• Virtual communities and the use of new technologies for research and teaching in marketing and administration</li> <li>• Assessment of market satisfaction</li> <li>• Socially responsible marketing and public marketing</li> <li>• Advertising and promotion of for-profit and non-profit entities</li> <li>• Design and assessment of customer loyalty programmes</li> <li>• Distribution, commercial logistics and merchandising</li> <li>• Economic valuation of brands, patents and other intangible assets</li> <li>• Establishing royalties for intangible assets</li> <li>• Analysis and valuation of brand devaluation in situations of unfair competition, brand copying and brand imitation</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Digital service provision: challenges and deficiencies</li> <li>• Factors involved in company competitiveness: corporate governance and strategies in different sectorial and institutional contexts</li> <li>• Internationalization and innovation strategies: development and implications for company competitiveness</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group has solid experience in Branding and Marketing. It provides expertise in offering rigorous and objective solutions to the strategic and market and brand research needs, ranging from a simple market research study to a complex technical legal / judicial report.</p> <ul style="list-style-type: none"> <li>• Tourism Marketing</li> <li>• Online tourism service business</li> </ul> <p><b>Others</b></p> <ul style="list-style-type: none"> <li>• <i>La Imagen del Destino Turístico Portugués en Galicia</i> (The image of the Portuguese tourism destination in Galicia) (Doctoral dissertation)</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>ENTREPRENEURSHIP AND STRATEGY</b>			
<p><b><u>Entrepreneurship and Strategy</u></b></p> <hr/> <p><b>PI: María Jesús Nieto, Zulima Fernández</b></p>	<ul style="list-style-type: none"> <li>• Entrepreneurship</li> <li>• Innovation management</li> <li>• Establishment and development of technology based companies</li> <li>• Business cooperation and strategic alliances</li> <li>• Corporate governance and social responsibility</li> <li>• Corporate strategies: business diversification and internationalization</li> <li>• Digital strategies</li> <li>• Family business</li> <li>• Management of small and medium-sized companies</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Factors involved in company competitiveness: corporate governance and strategies in different sectorial and institutional contexts</li> <li>• Value chain and value creation in international markets</li> <li>• Internationalization and innovation strategies: development and implications for company competitiveness</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group provides research on the reality for companies from the Strategic Management perspective and from the Human Resource approach.</p> <ul style="list-style-type: none"> <li>• Strategic management of tourism companies</li> <li>• Design of tourism services for Asian cultures</li> <li>• Collaborative tourism strategies</li> <li>• Creation of tourism companies</li> <li>• Business models and design thinking for tourism services</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
STATISTICS			
<p><b><u>Operations research</u></b></p> <hr/> <p><b>PI: Francisco Javier Nogales</b></p>	<ul style="list-style-type: none"> <li>• Stochastic programming</li> <li>• Non-linear optimization in very large-scale problems</li> <li>• Stochastic combinatorial optimization</li> <li>• Games theory</li> <li>• Combinatorial optimization</li> </ul>	<p><b>Private funding</b></p> <ul style="list-style-type: none"> <li>• Automatic prediction of likelihood of illegal occupation</li> </ul>	<p><b>Experience and Capabilities</b></p> <ul style="list-style-type: none"> <li>• Statistical models for the tourism sector</li> </ul>



R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
HUMANITIES - HISTORY, GEOGRAPHY AND ART			
<p><b><u>Territory, Environmental Resources and Patrimony (TERAP)</u></b></p> <p><b>PI: Guillermo Morales Matos</b></p>	<ul style="list-style-type: none"> <li>• Tourism resources and their organisation</li> <li>• Natural and cultural patrimony</li> <li>• Territorial and environmental impact of economic activities</li> <li>• Population growth, structure and dynamics</li> <li>• Governance and territorial and environmental implications</li> <li>• Territorial ideas, policies and conflicts</li> <li>• Genesis, evolution and environmental problems of urban areas</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Geography of tourism, leisure and recreation. Spaces and destinations for tourism in times of globalization and crisis</li> <li>• The geographic space of Madrid in film and its tourism potential</li> <li>• Conferences on war-related tourism and patrimony in Spain</li> </ul> <p><b>R&amp;D Regional Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Audiovisual fiction in the Regional Community of Madrid: shooting locations and the development of cinematographic tourism (FICMATUR)</li> </ul> <p><b>Private funding</b></p> <ul style="list-style-type: none"> <li>• Analysis from the Tourism perspective of Coastal Area Territorial Plans</li> <li>• Collaboration in Drafting the Special Territorial Plan for the Organisation of Tourism in Lanzarote</li> <li>• Comparative Study of International and Spanish Coastal Tourism Destinations for the General Directorate for Coasts</li> <li>• Draft of the diagnosis of rural tourism within the framework of the cooperation project with AECID "Sustainable rural tourism in Central America"</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This is a consolidated group with extensive research experience in various scientific disciplines, such as Geography, Art History, Urban Planning and Tourism, without taking a backseat in other complementary or similar disciplines.</p> <p>The group's goals include practical application, the analysis of territorial, urban and artistic transformation processes, the dissemination of academic work and the disclosure of scientific activity.</p> <ul style="list-style-type: none"> <li>• Cultural patrimony</li> <li>• Cultural and museum tourism</li> <li>• Territorial resources for tourism</li> <li>• Territorial planning for tourism</li> <li>• Geography of tourism and current tourism trends</li> <li>• Emergent tourism and new tourism models</li> <li>• Sustainable tourism</li> <li>• Creation and planning of tourism itineraries and routes</li> </ul> <p><b>Others:</b></p> <ul style="list-style-type: none"> <li>• "Espacios y destinos turísticos en tiempos de globalización y crisis" (Tourism spaces and destinations in times of crisis) (Book published by TERAP Group)</li> <li>• Cultural patrimony and responsible tourism (conference)</li> <li>• Patrimony as a tourism resource: a different way to appreciate patrimony (conference)</li> <li>• Cultural Resources And Tourism: Analysis and Problems (conference)</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
HUMANITIES - HISTORY, GEOGRAPHY AND ART			
<p><b><u>Cultural/Literary History</u></b></p> <hr/> <p>PI: Enrique Villalba Pérez</p>	<ul style="list-style-type: none"> <li>• Cultural history</li> <li>• Social history of culture</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Archaeological Heritage, New Technologies, Tourism, Education and Social Cost-effectiveness: a necessary link for the rural site</li> </ul> <p><b>R&amp;D Regional Plan Projects</b></p> <ul style="list-style-type: none"> <li>• AmerMad-CM - America in Madrid. Interconnected heritages and impact of tourism in the Regional Community of Madrid</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>The literary group's goal is to promote interdisciplinary research, study and debate in the area of Written Culture.</p>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
COMPUTER SCIENCE			
<p><b>GigaBD</b></p> <hr/> <p>PI: Jorge Luis Morato Lara</p>	<ul style="list-style-type: none"> <li>• Deep learning applications and data enrichment</li> <li>• Accessibility and comprehensibility of data</li> <li>• Veracity and reliability of data</li> <li>• Infrastructure to facilitate BigData</li> </ul>	<p><b>R&amp;D&amp;I National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• SOPAT. Personalized and accessible orientation service for tourism</li> <li>• MA2VICMR: Improving the access and visibility of the multilingual information in the Region of Madrid</li> </ul>	<p><b>Experience and Capabilities</b></p> <ul style="list-style-type: none"> <li>• Study Design Plan for an Expert Certificate in Inclusive Tourism (UC3M, 2017)</li> <li>• Studies on the readability of tourism information.</li> <li>• Publications:             <ul style="list-style-type: none"> <li>· <i>"Estimación de la comprensibilidad en paneles de museos, EPI"</i> (Estimation of comprehensibility of museum panels, EPI)</li> <li>· <i>"Evaluación de la comprensión de los paneles interpretativos en parajes naturales, SCIRE"</i> (Evaluation of the comprehension of interpretive panels in natural settings, SCIRE)</li> </ul> </li> <li>• ESVI-AL'17 Award (2<sup>nd</sup> International Congress on Technology and Tourism for all Persons, technologies for learning and accessible collaboration)</li> </ul>



R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>COMPUTER SCIENCE</b>			
<p><b>Applied Artificial Intelligence Group (GIAA)</b></p> <hr/> <p><b>PI: José Manuel Molina, Jesús García Herrero</b></p>	<ul style="list-style-type: none"> <li>• Automatic Learning and Data Mining Techniques</li> <li>• Evolutionary Computation and Multi-objective Optimisation</li> <li>• Agents and Multi-agent Systems: web, information retrieval, recommendation, electronic commerce, sensor management</li> <li>• Artificial Vision</li> <li>• Data Fusion Systems and Contextual Information</li> <li>• Vigilance Systems</li> <li>• Air Traffic Control (ATC)</li> <li>• Coastal Surveillance and Maritime Traffic</li> <li>• Indoor localization systems</li> <li>• Inference in adaptive, non-linear dynamic systems</li> <li>• Unmanned vehicles</li> </ul>	<p><b>Private funding</b></p> <ul style="list-style-type: none"> <li>• e-TUR2020. Tourism @ Retail</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group is highly renowned due to its capability to solve engineering problems by incorporating the most novel artificial intelligence techniques: automatic learning, evolutionary computation, data analysis, multi-objective optimisation, fuzzy systems and intelligent agents.</p> <ul style="list-style-type: none"> <li>• Computer systems in the tourism sector</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
COMPUTER SCIENCE			
<p><b><u>Human Language and Accessibility Technologies (HULAT)</u></b></p> <p><b>PI: Paloma Martínez, Belén Ruiz</b></p>	<ul style="list-style-type: none"> <li>• Natural Language Processing</li> <li>• Deep Learning methods applied to Natural Language Processing</li> <li>• Information Extraction in biomedical domain (clinical narrative, scientific publications and social media)</li> <li>• Methodological frameworks for developing accessible web applications</li> <li>• Speech processing and speaker recognition</li> <li>• Text Simplification</li> <li>• Soft Computing in Corporate Information Systems, Business processes integration</li> <li>• Information and Communications Technology and accessibility</li> </ul>	<p><b>R&amp;D&amp;I National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• SOPAT. Personalized and accessible guidance service for tourism</li> <li>• Design, development and prototyping of an ICT post-travel services platform for tourists. POST-VIA 2.0</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This is a multidisciplinary group that focuses its work on R&amp;D projects relating to natural language processing technologies, information retrieval and extraction in various domains, systems for searching for responses, usability and accessibility in user interfaces.</p>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>COMPUTER SCIENCE</b>			
<p><b>Knowledge Reusing</b></p> <hr/> <p><b>PI: Juan B. Llorens</b></p>	<ul style="list-style-type: none"> <li>• Knowledge representation, retrieval and reusing.</li> <li>• Development of model driven software.</li> <li>• Process and project management.</li> <li>• New technological innovation methods.</li> <li>• Organisation of Processes for Reutilisation.</li> <li>• Software Process measurement.</li> </ul>	<p><b>R&amp;D&amp;I National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Design, development and prototyping of an ICT post-travel services platform for tourists. POST-VIA.2.0</li> <li>• Cities Timanfaya</li> </ul> <p><b>Private funding</b></p> <ul style="list-style-type: none"> <li>• Platform for currency exchange based on a digital transformation model (P2PMONEY)</li> <li>• Propman (proposal manager)</li> <li>• CitiSim: Advanced intelligent platform for embedded entertainment in social media and business games for detection and improvement</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group is formed by a highly qualified scientific team capable of effectively combining software design and development with the domain of advanced document management techniques, all within an integral comprehension of Knowledge Management methodologies and tools.</p>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
COMPUTER SCIENCE			
<p><b>Planning and Learning</b></p> <hr/> <p><b>PI: Fernando Fernández Rebollo</b></p>	<ul style="list-style-type: none"> <li>• Artificial Intelligence</li> <li>• Task planning</li> <li>• Automatic learning</li> <li>• Problem resolution</li> <li>• Heuristic optimisation</li> <li>• Decision support systems</li> </ul>	<p><b>R&amp;D&amp;I National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Activity Recognition and Automatic Planning for the Design of Intelligent Assistants</li> <li>• Intelligent planning system for collective transport with the optimised generation of routes (PLICOGOR)</li> <li>• ONDROAD: Platform for Managing Digital Content and Tourism Services for Travellers</li> <li>• Software for the joint re-planning of resources in airlines with respect to incidents</li> <li>• Intermodal strategic planning approached with artificial intelligence techniques (GoalPLAN)</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group specialises in task planning, scheduling and automatic learning technologies.</p> <ul style="list-style-type: none"> <li>• Automation of dynamic planning and decision-making processes</li> <li>• Process optimisation based on intelligent data analysis and trend or risk prediction</li> <li>• Design of intelligent data retrieval - data mining systems based on cutting-edge technologies</li> <li>• Improvement of on-line services by means of the use of intelligent agents on the Internet</li> <li>• Application of artificial intelligence techniques to solving business problems (business intelligence)</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
COMPUTER SCIENCE			
<p><b>SoftLab</b></p> <hr/> <p>PI: Ángel García Crespo</p>	<ul style="list-style-type: none"> <li>• Processing of natural language: system of dialogue, mono- and multilingual Recovery of Information (RI), Question Answering, Adaptation in RI systems using ontologies</li> <li>• Biometrics: Security, Accessibility</li> <li>• Integration of applications</li> <li>• Technologies of data bases, Methodologies, Techniques of Modeling Data, space-time Data Bases, Control of restrictions of integrity in Data Bases, CASE platforms for development and learning, Adaptive and Intelligent teaching systems</li> </ul>	<p><b>R&amp;D&amp;I National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Design, development and prototyping of an ICT post-travel services platform for tourists. POST-VIA 2.0</li> </ul> <p><b>Private funding</b></p> <ul style="list-style-type: none"> <li>• Providing advice and technical assistance in the area of tourism</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group has extensive, solid experience in:</p> <ul style="list-style-type: none"> <li>• Disruptive innovation</li> <li>• Semantic &amp; Big Data</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>SYSTEMS ENGINEERING AND AUTOMATION</b>			
<p><b><u>Intelligent Systems Laboratory (LSI)</u></b></p> <p><b>PI: José María Armingol, Arturo de la Escalera, Francisco J. Rodríguez</b></p>	<ul style="list-style-type: none"> <li>• Autonomous vehicles</li> <li>• Computer vision systems</li> <li>• Advanced driving assistance systems</li> <li>• Unmanned aerial vehicles</li> <li>• Railway systems</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• SEGVAUTO-TRIES Project</li> <li>• Distributed decision support system for cooperative connected and autonomous driving in complex environments.</li> <li>• Integration of electric autonomous vehicles in urban environments.</li> <li>• Autonomous aeroterrestrial system for the collaborative inspection and digitization of the railway network.</li> </ul> <p><b>Private funding</b></p> <ul style="list-style-type: none"> <li>• Mobility 2030 Project</li> <li>• Cities Timanfaya Project</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group is dedicated to research and development in the area of applications for advanced perception, positioning and control for autonomous driving.</p> <ul style="list-style-type: none"> <li>• <b>Mobility 2030</b> Development of a system for the analysis of capacities on roads, detection of kamikaze vehicles and automatic toll payment management.</li> <li>• <b>CITIES Timanfaya</b> CITIES Timanfaya is a revolutionary project which proposes travelling through the Route of the Volcanoes in Timanfaya (Island of Lanzarote) in cutting-edge electric, autonomous and multimedia vehicles. CITIES will therefore not only turn the island of Lanzarote into a worldwide reference in quality tourism but will also position Spanish technology as the state-of-the-art in worldwide R&amp;D&amp;I.</li> </ul>



R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
<b>TELEMATIC ENGINEERING</b>			
<p><b>Network Technologies</b></p> <hr/> <p><b>PI: Francisco Valera</b></p>	<ul style="list-style-type: none"> <li>• Networks architecture and distributed services</li> <li>• Communication protocols</li> <li>• Future Internet</li> <li>• Content Delivery Networks (CDN)</li> <li>• Mobile and vehicular networks</li> <li>• Wireless networks</li> <li>• Optical networks: Access, Metro, Core</li> <li>• Network Science</li> <li>• Security in Computer Networks</li> <li>• Energy efficiency in Telecommunication Systems and Networks</li> <li>• High performance switching</li> <li>• Traffic analysis</li> <li>• Internet of Things (IoT)</li> <li>• Cognitive networks</li> <li>• 5G Networks</li> <li>• Connected Industry</li> </ul>	<p><b>European Projects</b></p> <ul style="list-style-type: none"> <li>• 5G-TOURS: SmarT mObility, media and e-health for toURists and citizenS</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group has a long and solid track record in research in network architecture, communication protocols and distributed services.</p> <p>It is formed by the following subgroups:</p> <ul style="list-style-type: none"> <li>• NETCOM (Network and Communication Technologies) PI: Arturo Azcorra</li> <li>• ADSCOM (Advanced Switching and Communication Systems) PI: David Larrabeiti</li> </ul>

R&D GROUP	LINES OF RESEARCH	R&D&I PROJECTS	TECHNOLOGICAL OFFER / OTHERS
SIGNAL THEORY AND COMMUNICATIONS			
<p><b>Multimedia Processing</b></p> <hr/> <p><b>PI: Fernando Díaz de María</b></p>	<ul style="list-style-type: none"> <li>• Speech recognition</li> <li>• H.264/AVC, HVC, 3D Video coding</li> <li>• Multimedia information processing: object and event detection and recognition, segmentation and classification of audio, images and video</li> </ul>	<p><b>R&amp;D National Plan Projects</b></p> <ul style="list-style-type: none"> <li>• Interactive Tourism Window. Accessible from any mobile phone (without an app) and with content extracted from analysing and interpreting public photographs uploaded onto social media by tourists visiting that same region (ESITUR)</li> </ul>	<p><b>Experience and Capabilities</b></p> <p>This group has experience with speech, audio, image and video processing techniques, particularly the automatic extraction of content, automatic speech recognition and cutting-edge video coding.</p>

*Co-funding:*

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