

Department: Mechanical Engineering

Group name: *Applied Thermodynamics, Energy and Construction*

Acronym: *GI-TENECO TENECO / Research Group*

Group Coordinator: López González, Luis María

ANEP Area/s: Mechanical, marine and aviation engineering; Civil engineering and architecture

Telephone: +34 941299536

E-mail: luis-maria.lopez@unirioja.es

Website:

Department Report: 10/12/2004

RESEARCH TEAM
No. of researchers: 9

<u>Researcher</u>	<u>Department</u>	<u>Professional Category</u>
López González, Luis María	Mechanical Engineering	Full Professor
García Lozano, César	Mechanical Engineering	Part-time Hire
Gómez Chomón, José Carlos	Mechanical Engineering	Associate
Iñarrea Las Heras, Ignacio	Modern Philology	Full Professor
Las Heras Casas, Jesús	Mechanical Engineering	Associate
López Ochoa, Luis María	Mechanical Engineering	Associate Professor
Mendivil Giro, Manuel Antonio	Mechanical Engineering	Associate
San Vicente Navarro, Alejandro	Mechanical Engineering	Associate
Vicuña Martínez, Javier Esteban	Electrical Engineering	Collaborator

COLLABORATORS
No. of collaborators: 0

<u>Collaborators</u>	<u>Department</u>	<u>Professional Category</u>
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Research areas

Planning, modeling, optimisation and energy management.
Energy and Environmental Rating of Housing (EERH).
Innovation in development and applications of the Technical Building Code (TBC), in the field of its Basic Documents HE, HS, SI and others
Development of innovative applications of renewable energies in the energy, industry and construction sectors especially.
Resolution of complex Engineering and Architecture problems by applying next generation mathematical and computing tools.
Optimisation of electricity generation from renewable energies and hybridisation.
Innovation in workplace health and safety, including integrated management.
High level re-engineering and solutions optimisation.
Phase change materials and their applications.

Scientific and technological offer

Inventories and energy plans.
Energy, environmental and technological audits.
Innovative technological developments of the TBC, in its various fields (HE, HS, SI and others).
Innovative developments of applications of renewable energies in industry and construction, especially with biomass (solid, liquid and/or gas).
Development of new methodologies in workplace health and safety.
Proposals for alternative solutions to the current TBC in various aspects of the same (HE, HS, SI, among others).
High-level developments and optimisation of products, equipment, sets, systems, installations and applications in the fields of Engineering and Architecture.
Development and optimisation of electricity production from renewable sources, with specific physical and mathematical algorithms for performance improvement, sustainability, operation, maintenance and life cycle.
Intelligent networks. Distributed generation. Polygeneration. District heating and cooling.
Development and optimisation of technological alternatives for smart, sustainable and inclusive growth of energy and construction from the perspective of innovation.
Sustainable mobility and responsible transport.
Exploitation of natural resources and products and by-products.
Special developments for the electricity generation from renewable sources (biomass, wind, solar). Hybrid systems.

National and International Relations

University of the Basque Country (UPV/EHU). Department of Thermal Machines and Motors.
Polytechnic University of Valencia (UPV). Department of Thermal Machines and Motors.
University of Vigo. Department of Mechanical Engineering, Thermal Machines and Motors and Fluids.
University of Castilla- La Mancha. Department of Thermal Machines and Motors.
Public University of Navarre. Area of Thermal Machines and Motors.
University of Zaragoza. Department of Thermal Machines and Motors.
University of Seville. Department of Thermal Machines and Motors.
University of Valladolid. Department of Thermal Machines and Motors.
University of León. Area of Thermal Machines and Motors.
University of Oviedo. Department of Energy. Department of Thermal Machines and Motors (Gijón).
Polytechnic University of Catalonia. Area of Thermal Machines and Motors.
Polytechnic University of Cartagena. Area of Thermal Machines and Motors.
Rovira i Virgili University. Department of Thermal Machines and Motors.
University of Burgos. Area of Thermal Machines and Motors.
Polytechnic University of Madrid. Department of Thermal Machines and Motors.
University of Deusto. Department of Computer Science and Applied Mathematics.
CIRCE (Energy Resources and Consumption Research Centre). Zaragoza, Aragon.
EVE (Basque Energy Entity). The Basque Government.
CIDAUT (Foundation for Research and Development in Automotive). Government of Castile and Leon.
INEGA (Galician Energy Institute). Government of Galicia.
EREN (Regional Energy Entity). Government of Castile and Leon.
AGECAM (Castile-La Mancha Energy Agency). Government of Castile-La Mancha.
IDAE (Institute for Energy Diversification and Saving). Ministry of Industry, Energy and Tourism. Spanish Government.
National University of La Rioja (Argentina).
Federal University of Pernambuco (Brazil).
Institut Supérieur Aquitain du Bâtiment et des Travaux Publics (France).