

The Democritus University of Thrace

The Democritus University of Thrace (DUTH) is one of the top universities in Greece. It was established by Legislative Decree No. 87 on 27th July 1973. DUTH is headquartered at the city of Komotini, which is the capital of the Administrative Region of Eastern Macedonia and Thrace. With more than 15,000 students 7 Faculties and 18 Departments and other institutions the Democritus University of Thrace plays an important role in strengthening the national and cultural identity of the region of Thrace. The mission of the Democritus University of Thrace is to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence.

The MeDiLab©

The globalized economy and research, the minimization of cost/produced unit and the increased demand for high quality contribute to the creation of new products and services calling for innovation, competitiveness and growth of industries during the last but also the forthcoming decades.

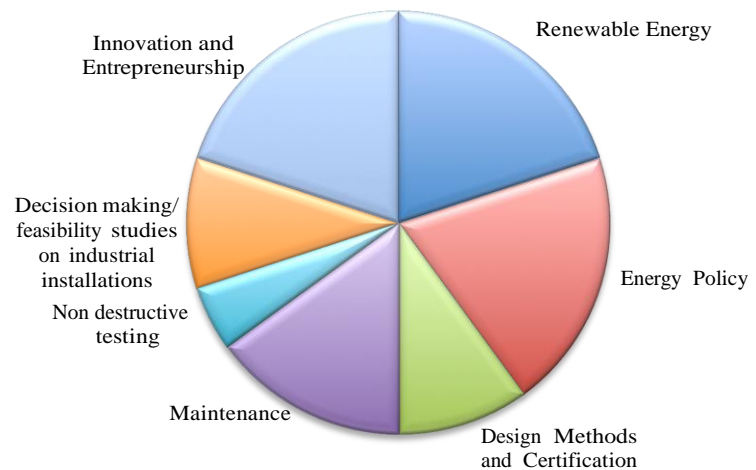
MeDiLab© offers a line of undergraduate courses on preparing the engineer for the future developments, studying the needs and technological developments of today while taught from the past experience.

In parallel, MeDiLab© mission is to pursue fertile industrial research cooperation with a variety of businesses which operate at various productive sectors promoting innovation, competitiveness and business growth.

MeDiLab© offers services on design, study/research, constructional, diagnostics, and innovative technologies. Its highly educated personnel, modern equipment and the collaborations that have been developed up to now, guarantee effective and prosperous collaborations.

MeDiLab© special focus on innovative technological developments and business growth through increased competitiveness has contributed to the development of the University's Innovation and Entrepreneurship Unit (IEU). The IEU aims at developing the entrepreneurial culture and thinking of the young people through actively supporting and equipping students and graduates with the necessary knowledge, skills and capabilities to develop entrepreneurial careers. The IEU offers educational training in entrepreneurship; practical training on entrepreneurship using innovative tools and techniques, mentoring, coaching, networking and technology transfer services linking academia with industry actors.

MeDiLab© Research Activities



Selected National and EU Projects



Fostering the use of low temperature geothermal sources through the development of operational exploitation guidelines and green energy solutions of enterprising.

The project promoted the wise use of low temperature geothermal fields as strategic energy sources for green development in Greece & Bulgaria. The project focused on the enhancement of geothermal systems component research & analysis through pilot applications and the development of operational application guidelines and cost effective techno-economic models of green energy use at both public and commercial level.



Covenant of Mayors

Sustainable Energy Action Plans, (SEAPs)

Sustainable Energy Action Plans (SEAPs) for Municipalities of Kavala, Alexandroupoli, and Orestiada. A Sustainable Energy Action Plan (SEAP) is the key document in which the Covenant signatory outlines how it intends to reach its CO₂ reduction target by 2020. It defines the activities and measures set up to achieve the targets, together with time frames and assigned responsibilities. The Covenant of Mayors is the mainstream European movement involving local and regional authorities, voluntarily committing to increasing energy efficiency and use of renewable energy sources on their territories.



The Europe Direct Information Centre of Xanthi operates under the Employment and Career Office of DUTH benefited by the latter's experience, know-how, highly skilled personnel and infrastructure in several Thracian cities. The Europe Direct of Xanthi provides:

- immediate answers to general questions related to the EU
- directions to the best sources of information/advice regarding the EU
- information on rights and opportunities of EU citizens and how to exercise them
- access to EU publications
- specific EU documents (legislation, publications, press releases etc.)
- factsheets, reports, statistics, working documents etc. on specific EU policies.
- Information about European integration, history, symbols, institutions, etc.



ELIH-Med is a strategic project co-financed under the MED Program. The project focuses on energy efficiency in low income housing (LIH) in the Mediterranean area and on the involvement of residents in energy retrofit in LIH in order to help the MED area to reach EU2020 objectives.

Energy efficiency in Low-income Housing in the Mediterranean



MainCODE aims to create a competitive cross-border economic zone, attractive for national and international investments, through the implementation of Life Cycle Asset Management and Maintenance Policies.

Maintenance and Life Asset Management: The Cornerstones for Sustainable Development

Innovation and Entrepreneurship Unit



Μονάδα Καινοτομίας & Επιχειρηματικότητας
Δημοκρίτειο Πανεπιστήμιο Θράκης

DUTH's Innovation and Entrepreneurship Unit (IEU) aims at promoting entrepreneurial culture and thinking of the young people through actively supporting and equipping students and graduates with the necessary knowledge, skills and capabilities to develop their entrepreneurial careers.

CRAFT

“Solar Air Conditioning System Using Very Low Cost Variable Plastic Ejector, with Hybrid potential for different markets”

CRAFT project focused on increasing competitiveness of SMEs, creating networks and utilizing ICT technologies. The project was funded by Interreg IIIA.



Renewable Energy Sources support the sustainable growth and operation of Democritus University Thrace - Renewable for sustainable student living

“The contribution of RES to the sustainable growth and operation of Democritus University Thrace – Development of a Sustainable Community”. The project was funded by EEA Grants (GR03 Renewable Energy Sources) with total budget of 1,800,365.78 EUR. Project duration: 1st October 2015 - 30th April 2017.

The interventions included the use of Renewable Energy Sources' technologies and the reduction of greenhouse gas emissions (GHG) within the Democritus University of Thrace (DUTH). The interventions were implemented at “Kimmeria” of Municipality of Xanthi, at a private area of DUTH and concluded to:

1. Total increase of renewable energy consumption by 2,373.61 MWh/year
2. Reduction of 636.41 tons of CO₂e emissions

MeDiLab© Staff



Professor Pantelis Botsaris is Vice Rector of Research and Innovation and an Associate Professor at the Department of Production and Management Engineering, DUTH. He studied at the School of Engineering, Department of Electrical and Computer Engineering, Faculty of Energy Systems, Lab. of Mechanical Engineering, Democritus University of Thrace. He holds a Patent (No. 1005235) and of a Utility model certificate (No. 20060200084) from the Industrial Property Organization of Hellas (O.B.I.). He has participated as a scientific coordinator and main researcher in many EU and national projects and is actively involved in innovative product development and promotion of entrepreneurship and business growth. He is the Scientific Coordinator of the Innovation and Entrepreneurship Unit of the Democritus University of Thrace that aims at the development of the entrepreneurial culture and thinking of students and graduates. Email: panmpots@pme.duth.gr



Dr. Anastasios Orfanidis holds a PhD from the Department of Electrical & Computer Engineering of Democritus University of Thrace. In 1995, he joined Space Engineering spa, Rome, Italy, where he worked on the development of an electromagnetic simulator for the analysis of waveguide horn antennas. He joined the Microwave Laboratory of the Department of Electrical & Computer Engineering, of Democritus University of Thrace, as a Research Fellow. In 1998, he joined the Hellenic Aerospace Industry, where he was involved in telecommunications and electronic warfare projects. Since 2003 he served as a visiting Lecturer at the departments of Production Management Engineering, Environmental Engineering, and Electrical & Computer Engineering, of the same University. Since January 2011 he is the Director of the Network Administration Center, of Democritus University of Thrace. His research interests include computer-aided design, numerical techniques, electromagnetic cad-tools, analysis and design of passive microwave components.



Dr. Ioannis A. Tsanakas, PhD, BSc/MSc, is a DUTH graduate, School of Engineering; received his PhD in 2013 (Dept. of Production Engineering & Management) and his Diploma (BSc/MSc) in 2006 (Dept. of Electrical & Computer Engineering). Today, he is a Postdoctoral Researcher of CEA Tech (Grenoble, France), while during the academic year 2013–2014 he had a Postdoctoral position in PROMES Laboratory of CNRS (France). His scientific research (22 peer-reviewed publications) mainly focuses on the areas of fault diagnosis, condition monitoring, reliability and accelerated ageing tests of renewable energy applications, with an expertise in photovoltaic and solar cells.



Dr. Paraskevi Giourka is Civil Engineer and holds a PhD from the University of Leeds, UK. Her research focused on 'Managing Innovation in the construction industry'. She holds an MBA from the University of Portsmouth, UK. Since 09/2013 she works at the Democritus University of Thrace at the Unit of Innovation and Entrepreneurship delivering business acceleration programs. Since 2007 she works at the University of West Macedonia as a research associate managing and implementing national and EU funded projects of total budget 4.5M Euros. Her interests include new product development, entrepreneurship and its education, innovation management, organizational innovation, and global innovation policies. Email: pgiourka@gmail.com



Konstantinos Lympopoulos, M.Sc. is Mechanical Engineer, NTUA and a PhD Candidate at the School of Engineering of DUTH. He holds a M.Sc. in Sustainable Energy and Environment, Cardiff, UK. His research focuses on studying and designing innovative renewable energy systems, energy efficiency measures, as well as studying and developing sustainable energy policies. His expertise is in solar industrial process heat systems.

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Dr Chaido Kiritsi is a Mechanical Engineer of Patras University and holds a PhD from the School of Engineering of Patras University. She has teaching experience as a scientific collaborator at DUTH and the School of Mechanicals Engineers of TEI Larisa. Her research interests' focus on the study –through simulation – of phenomena related to material failures and specifically to adhesion bond breaking of inhomogeneous materials. Email: mailto:ckyritsi@pme.duth.gr



Petros Pistofidis (PhD, MSc) received his Diploma in Computer Engineering and Informatics from the University of Patras (Greece), in 2005. He then received full scholarship from SaaS and in 2006 obtained his MSc in Computer Science from the University of Edinburgh (UK), majoring in Computer Systems and Software Engineering. In 2016 he successfully defended his PhD thesis in Technologies and Systems for Remote Monitoring and Diagnosis Support, at the School of Engineering of Democritus University of Thrace (DUTH - Greece). He is currently a Post-Doc Researcher at the Production Engineering and Management Department of DUTH and a Research Associate at ATHENA Research & Innovation Centre. His research interests include e-Maintenance, reliability centered maintenance, Internet of things, as well as enterprise, mobile and context-aware computing.



Panagiotis Bekakos is a Production and Management Engineer and an Industrial Information Engineer in the background and is currently a PhD Candidate at the School of Engineering of DUTH in the Department of Production Engineering and Management. His research focuses on studying and implementation of design algorithm for the development of sustainable product. He has extended experience in supervising and managing the design and implementation of complete production lines for six years, he currently works as an Industrial Designer with a sufficient number of completed projects in Greece, Bulgaria, Ukraine, Iran and India.

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Collaborations with Public and Private Institutions

Educational and Research Institutions

ATHENA, Research and Innovation Center in Information, Communication and Knowledge Technologies

CRES, Center for Renewable Energy Sources and Savings

NTUA, National Technical University of Athens

AUTH, Aristotle University of Thessaloniki

UWM, University of West Macedonia (Mater lab)

Local and Regional Authorities

Region of East Macedonia and Thrace

Regional Council of Innovation and Entrepreneurship of East Macedonia and Thrace

Region of Central Macedonia

Municipality of Kavala

Municipality of Xanthi

Municipality of Komotini

Municipality of Alexandroupolis

Municipality of Drama

Municipality of Orestiada

Municipality of Samothrace

Technical Chambers of EMTh

Chambers of Commerce and Industry of EMTh

Private Actors

GMC, Kampakas S.A. Design and production of metal parts and components for industrial and defense applications

BIMEKAT S.A. – Metal Constructions

Prisma Electronics – High tech products in the field of electronics, Information Technology, Telecommunications and Energy.

Dasteri, LED lighting manufacturing for indoor and outdoor spaces

Kriton Energy – Engineering and Construction

DQS – Certification of quality management solutions

Vergina, Macedonia Thrace Brewery S.A.

Rodopi, Dairy Products

More than Themes, Website Solutions

Scigen, Digital Design Solutions for Research Posters

Menexes, Office and Furniture Solutions