

**ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΙΓΑΙΟΥ**  
*Τμήμα ΠΕΡΙΒΑΛΛΟΝΤΟΣ*



ΛΟΦΟΣ ΠΑΝΕΠΙΣΤΗΜΙΟΥ  
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**Εργαστήριο Διαχείρισης Ενέργειας &  
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**Studies:**

- PhD in Mechanical Engineering, Dept. of Mechanical Engineering, University of Birmingham, UK, 1983.
- MSc in Industrial Management, University of Birmingham, UK, 1980
- Dipl. Ing. Mechanical-Electrical Engineer, Dept. of Mechanical Engineering, National Technical University of Athens, Greece, 1978.

Responsible TRS member for the following courses:

- Energy Conversion and the Environment
- Renewable Energy Sources
- Energy Analysis and Planning

Instructor in the following courses:

- Laboratory course in Transport of Mass and Energy
- Renewable Energy Sources

Research Interests

- Energy Conversion and Environmental Impacts.
- Energy Planning: Multicriteria Analysis and Applications.
- Energy Policy and Modelling.
- Energy Economics. Market Deregulation and Taxation.
- Renewable Energy Sources. Potential, Conversion Technology, Economics and Policy. (Solar, Wind, Geothermal, Biomass and Hydro).
- Energy Utilisation in Industry and Buildings: Energy Conservation and Auditing.

## Publications

- Troumbis I.A., G.E. Tsekouras, J. Tsimikas, C. Kalloniatis, D. Haralambopoulos, «*A Chebyshev Polynomial Feedforward Neural Network Trained by Differential Evolution and Its Application in Environmental Case Studies*», Environmental Modelling and Software, 126, 2020 104663.
- Troumbis I.A., G.E. Tsekouras, C. Kalloniatis, P. Papachiou, D. Haralambopoulos, “*Modeling Data Center Temperature Profile in Terms of a First Order Polynomial RBF Network Trained by Particle Swarm Optimization*”, Int. Conf. on Artificial Neural Networks, 587-595, 2018. In: Kůrková V., Manolopoulos Y., Hammer B., Iliadis L., Maglogiannis I. (eds) Artificial Neural Networks and Machine Learning – ICANN 2018. ICANN 2018. Lecture Notes in Computer Science, vol 11140. Springer, Cham.
- Sklavos S., G. Gatidou, A. Stasinakis, D. Haralambopoulos, “*Use of solar distillation for olive mill wastewater drying and recovery of polyphenolic compounds*”, Journal of Environmental Management, 162, 46-52, 2015.
- Polatidis, H., Haralambidou, K., Haralambopoulos, D., “*Decision Analysis for geothermal energy: a comparison between the ELECTRE III and the PROMETHEE II methods*”, Energy Sources, Part B: Economics, Planning, and Policy 10 (2015) 241-249
- Demetriou, D., Polatidis, H., Haralambopoulos, D., “*Integrated Energy Planning for the Residential Sector: The case-study of Cyprus*”, Energy Sources, Part B: Economics, Planning, and Policy 9 (2014) 183-195
- Sinioros E., P.Stamou, M.Lasithiotakis, D.Akriotis and D.Haralambopoulos, “*A preliminary experimental and environmental feasibility case study of glass asphalt production in Lesvos island, Greece*”, Environmental Quality Management, 24, 2, 13-35, 2014.
- Ioakeimidis C., H. Polatidis and D. Haralambopoulos, “*Use of Renewable Energy in Aquaculture: An Energy Audit case-study analysis*”, Global NEST Journal, 2013.
- Hatzigeorgiou E., H.Polatidis and D.Haralambopoulos, “*Modeling the relationship among energy demand, CO<sub>2</sub> emissions and economic development: A survey for the case of Greece*”, Global NEST Journal, 2013.
- Dimitriou D., H. Polatidis and D.Haralambopoulos, “*Integrated Energy Planning for the Residential Sector: The case-study of Cyprus*”, Energy Sources, Part B, (2013).
- Georgiou A., H. Polatidis and Dias Haralambopoulos, “*Wind energy resource assessment and development: Decision analysis for site evaluation and application*”, Energy Sources, Part AQ Recovery, Utilisation, and Environmental Effects, 2011.
- Karetzos S., D. Haralampopoulos, K. Kotis, “*An Ontology-based framework for Authoring Tools in the Domain of Sustainable Energy Education*”, International Journal of Agricultural and Environmental Information Systems, 2(1), 40-62, January-March 2011.
- Salta M., H. Polatidis, Dias Haralambopoulos, “*Industrial combined heat and power (CHP) planning: Development of a methodology and application in Greece*”, Applied Energy 88 (2011) 1519–1531.
- Tegou, L.I., H.Polatidis and D.Haralambopoulos, “*Environmental management framework for wind farm siting: Methodology and case study*”, Journal of Environmental Management, 91 (2010), 2134-2147.
- Hatzigeorgiou E., H. Polatidis, D. Haralambopoulos, “*Energy CO<sub>2</sub> emissions for 1990-2020: A Decomposition Analysis for EU-25 and Greece*”, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, (2009).

- Karetzos S., D.Haralambopoulos, "An ontology to support authoring tools for sustainable energy education", 1st International Workshop on "Intelligent Systems for Environmental (Knowledge) Engineering and EcoInformatics, Fukuoka, Japan, (2009).
- Salta M., H.Polatidis, D.Haralambopoulos, "Energy use in the Greek manufacturing sector: A methodological framework based on physical indicators with Aggregation and Decomposition Analysis", Energy (2009).
- Hatzigeorgiou, E., H.Polatidis, D.Haralambopoulos, "CO<sub>2</sub> emissions in Greece for 1990-2002: A decomposition analysis and comparison of results using the Arithmetic Mean Divisia Index and Logarithmic Mean Divisia Index techniques", Energy 33 (2008) 492-499.
- Polatidis H., D.Haralambopoulos, "Renewable Energy Sources Planning & Design: A multi-criteria approach", in Jeroen van den Bergh and Frank Bruinsma, Managing the Transition to Renewable Energy: Theory and Practice, p. 295-325, Edward Elgar, 2008 (book).
- Polatidis, H., Haralambopoulos, D., Bruinsma, F., Vreeker, R., Munda, G., (2009), "Decision Aid with the MCDA-RES software: A Wind-Hydro Energy Application for an Island of the Aegean, Greece", Energy Sources Part B: Economics, Planning, 4:4, 407-419.
- Polatidis, H., Haralambopoulos, D., "Renewable Energy Systems; A Societal & Technological Platform", Renewable Energy 32 (2007) 329-341.
- Polatidis, H., Haralambopoulos D., "Decomposition Analysis and Design of sustainable renewable energy systems; A new approach", Energy Sources Part B 2:4 (2007) 371-380.
- Papadopoulos E. and Haralambopoulos D.A., "Carbon Emissions: Responses to Energy Intensity, Energy Conversion and Energy Prices. Cointegration analysis for Greece", ECOS 2006, American Society for Mechanical Engineers (ASME), 19th Int. Conf. on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems, 2006.
- Polatidis, H., Haralambopoulos, D., Munda, G., Vreeker, R., "Selecting an appropriate Multi-Criteria Decision Aid Technique for renewable energy planning", Energy Sources Part B 1 (2006) 181-193.
- Polatidis, H., Haralambopoulos, D., "Local renewable energy planning; A participatory multi-criteria approach", Energy Sources 26 (2004) 1253-1264.
- Haralambopoulos, D., Polatidis, H., "Renewable energy projects: structuring a multi-criteria group decision-making framework", Renewable Energy 28 (2003) 961-973.
- Polatidis, H., Haralambopoulos, D., Kemp, R., Rothman, D., "Creating an energy system that we want but don't know yet, using Integrated Assessment, Transition Management and Multi-Criteria Analysis", Integrated Assessment 4 (2003) 205-213.
- Haralambopoulos D., Biskos G., Halvadakis C. and Lekkas T. "Dewatering of wastewater sludge through a solar still", Renewable Energy, 26 (2002) 247-256.
- Haralambopoulos D.A., Fappas P., Safos M. and Kovras H. (1999), "Energy consumption in the domestic sector: The case of Mytilene", Energy-The International Journal 26 (2001) 187-196.

## PROJECTS (recent)

**REACT** - Renewable Energy for self-sustainable island Communities (2019-2022).

REACT will demonstrate the potential of large-scale deployment of RES and storage assets on geographical islands to bring economic benefits, contribute to the decarbonisation of local energy systems, reduce greenhouse gas emissions (GHG) and improve air quality.

Funding: EUROPEAN COMMISSION Innovation and Networks Executive Agency  
ENERGY RESEARCH

**ICOSE** - TEMPUS-Joint European Project: Innovative Curriculum on Sustainable Energy-Development of a Master Program in Renewable Energy and Efficient Building Technologies for graduate engineers and architects.

Funding: European Commission.

**THERMOPOLIS** - Development of an Integrated Methodology for the exploitation of low enthalpy geothermal sources.

Funding: Greek General Secretariat for Research and Technology.

**Energy Planning**: Development of a Framework for Energy Systems with Distributed Generation, Renewable Energy Technologies and Energy Efficiency. The Technological, Spatial and Analytical Dimensions. European National Fund. Programme for the Support of Human Resources in Research - ΠΕΝΕΔ».

Funding: Ministry of Development.

Methodological Framework for the Analytical Decomposition of Energy and Environmental Indicators: Development of a Software Tool and Application for Greece. European National Fund, Programme Pythagoras II»

Funding: Greek Ministry of Education.

**MCDA-RES** Development and Application of a Multi-Criteria Decision Analysis Software Tool for Renewable Energy Sources, Category: Accompanying Measures, NNE 5/273/2001. Commission, Directorate General for Energy and Transport (DG TREN), RTD and Demonstration on Energy, Environment and Sustainable Development-Part B: Energy Programme.

Funding: European Commission.

Development of a Geothermal Source in a Remote Island Region: The case of Chios in the Northern Aegean. Contract No: XVII/4.1030/Z/99-233. European Commission, Directorate General for Energy DG XVII, ALTENER II programme.

Funding: European Commission