

1. Personal Information

First Name: Apostolos
Last Name: Michopoulos
Father's Name: Konstantinos
Day of Birth: January 30, 1977
Place of Birth: Larissa
Nationality: Hellenic
Marital Status: Single

2. Contact details

Address: Cyprus University of Technology,
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3. Education and Training

- 1995-2003 *Undergraduate Student.* School of Mechanical Engineering, Faculty of Engineering, Aristotle University of Thessaloniki.
Diploma (M.Sc.) of Mechanical Engineer, November 21, 2003.
Grade: 6.97/10.0 (Very Good)
M.Eng. Thesis: "*The Effect of Environmental Parameters on Product Recovery Using System Dynamic Analysis*".
Supervisors: Ass. Prof. P. Georgiadis, Dr. D. Vlachos.
- 2003-2008 *Phd Candidate.* Public Dissertation on April 21, 2008. Nomination on July 16, 2008.
Phd Thesis: "*Theoretical and Experimental Approach of Ground Heat Exchanger*"
Supervisor: Prof. Nikolas Kyriakis
Grade: Excellent
- 2007-2012 *M.Sc. Student.* Project Management on Hellenic Open University.
Nomination on December 02, 2012.
M.Sc. Thesis: "*Evaluation and Optimization of the Energy Saving Interventions on the Hellenic Buildings*"
Supervisor: Ass. Prof. Serafim Polyzos
Grade: Excellent (9.5/10.0)

4. Foreign Languages

English: Independent user. Certificate of Competency in English (Lower) of Michigan University.

5. Academic and Professional Experience

- 2013-now Scientist Expert, Cyprus University of Technology, Department of Environmental Science and Technology. Lecturing on: Design of Energy Systems (undergraduate), and Oil and Gas Storage and Transportation Systems (postgraduate).

2013-now	Senior Researcher, Cyprus University of Technology, Department of Environmental Science and Technology, Faculty of Geotechnical Sciences and Environmental Management.
2012-2013	Scientist Expert, Cyprus University of Technology, Department of Environmental Science and Technology. Lecturing on Principles of Engineering (undergraduate), Design of Energy Systems (undergraduate), and Thermofluid Dynamics (postgraduate).
2011	Visiting Lecturer, Cyprus University of Technology, Department of Environmental Science and Technology. Lecturing on Principles of Engineering (undergraduate), and Energy Resource Management (postgraduate).
2009-2013	Senior Researcher, Aristotle University of Thessaloniki, Faculty of Engineering, School of Mechanical Engineering.
2003-2008	Research Associate, Aristotle University of Thessaloniki, Faculty of Engineering, School of Mechanical Engineering.
2004-2007	Part time Instructor at Vocational Training Institute of Evosmos (IEK), Thessaloniki. Lecturing on Air-Condition and Compressor Technology.
2004-2008	Part time Instructor at 14 th Technical Professional Lyceum (TEE), Thessaloniki. Tutorial on Materials Strength, and Design, Manufacturing and Maintenance of Heating and Cooling distribution networks and apparatus.
1999-2000	Research Assistant, Parabolic Geometry Laboratory of General Department, of Aristotle University of Thessaloniki (A.U.Th.)

6. Teaching Experience in:

6.1 Universities

As full-time visiting Lecturer and part-time Scientist Expert at the Cyprus University of Technology, I taught the following under-graduate course:

Academic Year	Course	Semesters
2010-2011 2012-2013	Principles of Engineering (EST-223)	2

As part-time Scientist Expert at the Cyprus University of Technology, I taught the following under-graduate course:

Academic Year	Course	Semesters
2012-2013 2013-2014a 2013-2014b 2014-2015	Design of Energy Systems (EST-451)	4

As full-time visiting Lecturer at the Cyprus University of Technology, I taught the following post-graduate course:

Academic Year	Course	Semesters
2010-2011	Energy Resource Management (EST-553)	1

As part-time Scientist Expert at the Cyprus University of Technology, I taught the following post-graduate course:

Academic Year	Course	Semesters
2012-2013	Thermofluid Dynamics (EST-505)	1

As part-time Scientist Expert at the Cyprus University of Technology, I taught the following post-graduate course (co-teaching):

Academic Year	Course	Semesters
2013-2014	Oil and Gas Storage and Transportation Systems (EST-537)	1

As PhD Candidate and Senior Research of School of Engineering of Aristotle University of Thessaloniki, I was a teaching assistant of the following under-graduated courses:

Academic Year	Course	Lecturer	Semesters
2006-2007 2007-2008 2008-2009 2009-2010 2010-2011 2011-2012 2012-2013	Environmental Protection Technology (318)	Prof. N. A. Kyriakis	7
2007-2008 2008-2009 2009-2010 2010-2011 2011-2012 2012-2013	Mechanics Laboratory (127)	Prof. N. A. Kyriakis	6

6.2 Vocational Training Institutes

As part-time instructor at the Public Training Institute of Evosmos Thessaloniki, I had full responsibility for the following courses:

Academic Year	Course	Expertise	Semesters
2004-2005 2005-2006 2006-2007	Air-Conditioning	Technician of HVAC Installations	5
2006-2007	Compressors	Technician of HVAC Installations	1

6.3 Secondary Education

From 2004-2005 to 2007-2008 academic years, I was working as part-time Instructor at 14th Technical Professional Lyceum of Thessaloniki.

6.4 Supervision of Bachelor Thesis

As Research Assistant of School of Mechanical Engineering, I was responsible assistant of the following bachelor thesis:

- 6.4.1 Tsikindikou, M. Combined Heat and Power Systems, 2010 (Supervisor: Prof. N. Kyriakis).

6.5 Supervision of Master in Engineering Theses

As Research Assistant and Senior Researcher of School of Mechanical Engineering, I was responsible assistant of the following Master in Engineering (M.Eng.) theses:

- 6.5.1 Zissakis, K. Operation of Ground Heat Exchanger on City Hall of Pylaia – One year experience, 2004 (Supervisor: Prof. N. Kyriakis).
- 6.5.2 Sioziopkos, I., Terzidis D. Energy Audit of the air-conditioning system on New City Hall of Pylaia, (Supervisors: Prof. N. Kyriakis, Lecturer K. Papakostas).
- 6.5.3 Kepesidis, K. Software development for sizing vertical ground heat exchangers based on ASHRAE's approach, 2006 (Supervisor: Prof. N. Kyriakis).
- 6.5.4 Vassiliadis, P., Zografidis K. Assessment of analytical algorithms predicting the ground temperature, 2006 (Supervisor: Prof. N. Kyriakis).
- 6.5.5 Michailidis, M. Software development on Lab-view environment for on-line calculation of efficiency of a hot water boiler, 2006 (Supervisor: Prof. N. Kyriakis).
- 6.5.6 Vassiliou, Ch., Ellinas, N. Reconstruction of an experimental dryer and validation of the measurements, 2007 (Supervisor: Prof. N. Kyriakis).
- 6.5.7 Karipidis, P. Energy and Environmental assessment of atomized natural gas boilers in Thessaloniki area, 2008 (Supervisor: Prof. N. Kyriakis).
- 6.5.8 Kolios, P. Design of a ground source heat systems on different climate conditions in Greece – House Building case study, 2008 (Supervisors: Prof. N. Kyriakis, Lecturer K. Papakostas).
- 6.5.9 Tsopouridou, M., Pana, A. Cerium effect on emissions and efficiency of hot water boilers, 2008 (Supervisor: Prof. N. Kyriakis).
- 6.5.10 Kyratzoglou, A.-Chr. Drying conditions for nuts production, 2009 (Supervisor: Prof. N. Kyriakis).
- 6.5.11 Konstandinidis, M. Design of a ground source heat systems on different climate conditions in Greece – Office Building case study, 2010 (Supervisors: Prof. N. Kyriakis, Lecturer K. Papakostas).
- 6.5.12 Matsota A. Design of a vertical ground source heat pump system, 2010 (Supervisor: Prof. N. Kyriakis).
- 6.5.13 Deligiannis, N. Assessment of the design methodologies of vertical ground source heat pump systems – Energy assessment, 2010 (Supervisor: Prof. N. Kyriakis).
- 6.5.14 Fragopoulos Z. Models for the prediction of the soil's temperature: A review, 2012, (Supervisor: Prof. N. Kyriakis).
- 6.5.15 Papagiannis, E. Design of a fluidized bed dryer and energy analysis of the drying process, 2012, (Supervisor: Prof. N. Kyriakis).
- 6.5.16 Gianniou P. Energy, economical and environmental evaluation of a conjugated air-source heat pump system for space heating on Hellenic buildings, 2012, (Supervisor: Prof. N. Kyriakis).

- 6.5.17 Tsikintikou M. The usage of olive-oil kernel on combined heat and power systems. The Crete's case study, 2013, (Supervisor: Prof. N. Kyriakis).
- 6.5.18 Papadopoulos, D. Energy evaluation of a ground source heat pump system for greenhouse heating, 2013, (Supervisors: Prof. N. Kyriakis, Assist. Prof. A. Kalfas).

7. Published Work

7.1 Phd Thesis

A. Michopoulos, "Theoretical and Experimental Approach of Ground Heat Exchanger", April 2008, ISBN: 978-960-930655-3.

7.2 Book chapters (peer reviewed)

- 7.2.1 A. Michopoulos, Calculation Methods of HVAC Load and Energy Consumption, in: System Design Guidebook, P.C. Papaioannou (Ed.), pp. 26-39, Ktirio Publications Ltd., ISBN: 978-960-6803-12-3, 2012. (in Greek)
- 7.2.2 A. Michopoulos, Space Heating Generation Systems, in: System Design Guidebook, P.C. Papaioannou (Ed.), pp. 40-69, Ktirio Publications Ltd., ISBN: 978-960-6803-12-3, 2012. (in Greek)
- 7.2.3 A. Michopoulos, Space Cooling Generation Systems, in: System Design Guidebook, P.C. Papaioannou (Ed.), pp. 70-77, Ktirio Publications Ltd., ISBN: 978-960-6803-12-3, 2012. (in Greek)
- 7.2.4 A. Michopoulos, Space HVAC Distribution Systems, in: System Design Guidebook, P.C. Papaioannou (Ed.), pp. 78-85, Ktirio Publications Ltd., ISBN: 978-960-6803-12-3, 2012. (in Greek)
- 7.2.5 A. Michopoulos, Space Heating and Cooling Emission Systems, in: System Design Guidebook, P.C. Papaioannou (Ed.), pp. 86-93, Ktirio Publications Ltd., ISBN: 978-960-6803-12-3, 2012. (in Greek)
- 7.2.6 A. Michopoulos, Auxiliary Space Heating and Cooling Systems, in: System Design Guidebook, P.C. Papaioannou (Ed.), pp. 94-95, Ktirio Publications Ltd., ISBN: 978-960-6803-12-3, 2012. (in Greek)
- 7.2.7 A. Michopoulos, Ventilation and Air-Conditioning Systems, in: System Design Guidebook, P.C. Papaioannou (Ed.), pp. 96-103, Ktirio Publications Ltd., ISBN: 978-960-6803-12-3, 2012. (in Greek)
- 7.2.8 A. Michopoulos, Facades and Energy Production, in: Facades, P.C. Papaioannou (Ed.), pp. 134-145, Ktirio Publications Ltd., ISBN: 978-960-6803-13-0, 2013. (in Greek)

7.3 Publications in International peer-reviewed journals

- 7.3.1 N. Kyriakis, A. Michopoulos, K. Pattas, On the Maximum Thermal Load of Ground Heat Exchangers, Energy and Buildings, Volume 38, Issue 1, pp. 25-29, 2006.
- 7.3.2 A. Michopoulos, D. Bozis, P. Kikidis, K. Papakostas, N.A. Kyriakis, Three-Years Operation Experience of a Ground Source Heat Pump System in Northern Greece, Energy and Buildings, Volume 39, Issue 3, pp. 328-334, 2007.
- 7.3.3 A. Michopoulos, G. Martinopoulos, K. Papakostas, N. Kyriakis, Energy Consumption of a Residential Building - Comparison of Conventional and RES-based Systems, International Journal of Sustainable Energy, Volume 28, Issue 1-3, pp. 19-27, 2009.
- 7.3.4 K.T. Papakostas A.K. Michopoulos, N.A. Kyriakis, Equivalent Full Load Hours for Estimating Heating and Cooling Energy Requirements in Buildings: Greece Case Study, Applied Energy, Volume 86, Issue 5, pp. 757-761, 2009.

- 7.3.5 A. Michopoulos, N. Kyriakis, Predicting the fluid temperature at the exit of the vertical ground heat exchangers, Applied Energy, Volume 86, Issue 10, pp. 2065-2070, 2009.
- 7.3.6 A. Michopoulos, N. Kyriakis, A New Energy Analysis Tool for Ground Source Heat Pump Systems, Energy and Buildings, Volume 41, Issue 9, pp. 937-941, 2009.
- 7.3.7 A. Michopoulos, N. Kyriakis, The Influence of a Vertical Ground Heat Exchanger Length on the Electricity Consumption of the Heat Pumps, Renewable Energy, Volume 35, Issue 7, pp. 1403-1407, 2010.
- 7.3.8 A. Michopoulos, K.T. Papakostas, Th. Mavrommatis, N. Kyriakis, Comparative Assessment of Eight Models Predicting the Ground Temperature, JP Journal of Heat and Mass Transfer, Volume 4, Issue 2, pp. 119-135, 2010.
- 7.3.9 A. Michopoulos, K.T. Papakostas N. Kyriakis, Potential of autonomous ground-coupled heat pump system installations in Greece, Applied Energy, Volume 88, Issue 6, pp. 2122-2129, 2011.
- 7.3.10 A. Michopoulos, V. Voulgari, K. Papakostas, N. Kyriakis, Evaluation of different weather files on energy analysis of buildings, International Journal of Energy and Environment, Volume 3, Issue 2, pp. 195-208, 2012.
- 7.3.11 K.T. Papakostas, A. Michopoulos, Th. Mavromatis, N. Kyriakis, Changes of temperature data for energy studies over time and their impact on energy consumption and CO₂ emissions. The case of Athens and Thessaloniki – Greece, International Journal of Energy and Environment, Volume 4, Issue 1, pp. 59-72, 2013.
- 7.3.12 A. Michopoulos, T. Zachariadis, N. Kyriakis, Operation characteristics and experience of a ground source heat pump system with a vertical ground heat exchanger, Energy, Volume 51, pp. 349-357, 2013.
- 7.3.13 A. Michopoulos, V. Voulgari, N. Kyriakis, University buildings in Greece. Energy analysis of heating and cooling demand, International Journal of Energy and Environment, Volume 4, Issue 3, pp. 399-408, 2013.
- 7.3.14 A. Michopoulos, V. Skoulou, V. Voulgari, A. Tsikaloudaki, N.A. Kyriakis, The exploitation of biomass for building space heating in Greece: Energy, Environmental and Economic Considerations, Energy Conversion and Management, Volume 78, pp. 276-285, 2014.

7.4 Publications in Hellenic peer-reviewed journals

- 7.4.1 N. Kyriakis, A. Michopoulos, K. Pattas, Ground Heat Exchanger of Pylaia. Energy Evaluation after the First Year of Operation, Technika Chronika, Scientific Journal of the TCG, Volume IV, Issue 1-2, pp. 41-48, 2002. (in Greek).
- 7.4.2 A. Michopoulos, D. Bozis, P. Kikidis, K. Papakostas, N.A. Kyriakis, Ground Source Heat Pump System of Pylaia's New City Hall - Operation Results, Technika Chronika, Scientific Journal of the TCG, Issue 1, pp. 1-8, 2011. (in Greek).

7.5 Peer-reviewed papers in International conferences' proceedings

- 7.5.1 A. Michopoulos, D. Bozis, P. Kikidis, K. Papakostas and N. Kyriakis, Ground source heat pump system in a public building of northern Greece – operation experience and results, 36th International Congress on Air-Conditioning, Heating and Refrigerating, (HVAC & R), Belgrade, November 30 - December 2, 2005.
- 7.5.2 A. Michopoulos, N. Kyriakis, Th. Mavrommatis, Comparative Assessment of Three Models for Predicting Ground Temperature, Renewable Energy 2006, Makuhari Messe, Chiba, Japan, October 9-13, 2006.
- 7.5.3 A. Michopoulos, G. Martinopoulos, K. Papakostas, N. Kyriakis, Energy Consumption of a Residential Building – Comparison of Conventional and RES-based Systems, 38th

International Congress on Air-Conditioning, Heating and Refrigerating, (HVAC & R), Belgrade, December 5-7, 2007.

- 7.5.4 A. Michopoulos, N. Kyriakis, *A New Energy Analysis Tool for Ground Source Heat Pump Systems*, 39th International Congress on Air-Conditioning, Heating and Refrigerating, (HVAC & R), Belgrade, December 3-5, 2008.
- 7.5.5 K.G. Tsikaloudaki, T.G. Theodosiou, A.K. Michopoulos, *Comparative assessment of the Greek and the Cypriot Regulation for thermal insulation by their implementation in a typical building*, 4th International Conference on Renewable Energy Sources and Energy Efficiency - New Challenges, Nicosia Cyprus, June 6-7, 2013, (Paper No. 1312), pp. 79-88.
- 7.5.6 A. Michopoulos, K. Tsikaloudaki, V. Voulgari, T. Zachariadis, *Ground source heat pump systems for residential buildings in warm climates: Energy, Environmental and Economic considerations*, The First International ASHRAE Conference on Efficient Building Design – Materials and HVAC Equipment Technologies. Beirut Lebanon, October 2-3, 2014. Paper No: 14790.
- 7.5.7 A. Michopoulos, A. Tsikaloudaki, V. Voulgari, Th. Zachariadis, *Analysis of Ground Source Heat Pump Systems in Residential Buildings*, World Geothermal Congress, 19-24 April 2015 Australia – New Zealand, Paper No. 29014.

7.6 Peer-reviewed papers in Hellenic conferences' proceedings

- 7.6.1 P. Georgiadis, D. Vlachos, A. Michopoulos, *The Effect of Environmental Parameters on Product Recovery Using System Dynamic Analysis*, 14th International Conference on Operational Research Xanthi 2001. (in Greek).
- 7.6.2 A. Michopoulos, D. Bozis, N. Kyriakis, *Ground Source Heat Pump System of Pylaia's New City Hall. 2003 – 2005 Operation Results*, 8th National Conference on Renewable Energy Sources, pp. 511-518, Thessaloniki 2006. (in Greek).
- 7.6.3 A. Michopoulos, K. Pattas, N. Kyriakis, *The Maximum Thermal Load of a Ground Heat Exchanger as a Function of Soil Temperature*, 8th National Conference on Renewable Energy Sources, pp. 519-523, Thessaloniki 2006. (in Greek).
- 7.6.4 A. Michopoulos, N. Kyriakis, *The Influence of a Vertical Ground Heat Exchanger Length on the Electricity Consumption of the Heat Pumps*, 9th National Conference on Renewable Energy Sources, pp. 573-580, Geroskipou 2009. (in Greek).
- 7.6.5 K. Papakostas, A. Michopoulos, Th. Mavrommatis, N. Kyriakis, *Temperature Data of Athens and Thessaloniki for Energy Studies of Buildings– Comparison between the decades 1983-1992 and 1993-2002*, 3rd Hellenic Conference of Environment Council of A.U.Th, pp. 433-440, Thessaloniki 2009. (in Greek).
- 7.6.6 A. Michopoulos, K. Papakostas, P. Kollios, N. Kyriakis, *Potential of hybrid ground-coupled heat pump system installations in Greece*, International Forum “Geothermal Energy in the Spotlight”, GES-2009, Thessaloniki 2009, ISBN 978-960-6746-07-9, (in Greek).
- 7.6.7 D. Bozis, A. Michopoulos, G. Kotsou, K. Papakostas, N. Kyriakis, *Energy Piles, A Case Study in Greece*, International Forum “Geothermal Energy in the Spotlight”, GES-2009, Thessaloniki 2009, ISBN 978-960-6746-07-9, (in Greek).
- 7.6.8 A. Michopoulos, V. Voulgari, K. Tsikaloudaki, T. Zachariadis, *Energy, Environmental and Economic Benefits of the Installation of Ground Source Heat Pumps Systems on Commercial Buildings of Cyprus*, 10th National Conference on Renewable Energy Sources, Thessaloniki Greece, November 26-28, 2014, Volume A, pp. 447-457. Paper No: 80.

7.7 Publications in specialized technical magazines

- 7.7.1 N. Kyriakis, A. Michopoulos, Ground Source Heat Pump Systems for Heating and Air-Conditioning, "Ktiro" Technical Magazine, Issue 174, pp. 49-54, October 2005 (in Greek).
- 7.7.2 K.T. Papakostas, A. Michopoulos, Air-Filters for the Air-Conditioning and Ventilation Systems, "Ktiro" Technical Magazine, Issue 177, pp. 41-56, March 2006 (in Greek).
- 7.7.3 K.T. Papakostas, A. Michopoulos, Heat Pumps, "Ktiro" Technical Magazine, Issue 182, pp. 139-156, September 2006 (in Greek).
- 7.7.4 A. Michopoulos, The Maintenance of the HVAC Systems, "Ktiro" Technical Magazine, Issue 188, pp. 85-101, May 2007 (in Greek).
- 7.7.5 N. Kyriakis, A. Michopoulos, The Ground Source Heat Pump System of the Pulaia's New City Hall, "Ktiro" Technical Magazine, Issue 189, pp. 61-66 June 2007 (in Greek).
- 7.7.6 A. Michopoulos, Progresses at the Renewable Energy Sources Sector, "Ktiro" Technical Magazine, Issue 193, pp. 33-36, November 2007 (in Greek).
- 7.7.7 K.T. Papakostas, A. Michopoulos, The Energy Saving Fireplaces, "Ktiro" Technical Magazine, Issue 195 (1/2008), pp. 105-110, January – February 2008 (in Greek).
- 7.7.8 K.T. Papakostas, A. Michopoulos, Thermal Radiators, "Ktiro" Technical Magazine, Issue 9/2008, pp. 71-78, November 2008 (in Greek).
- 7.7.9 A. Michopoulos, Water Heating on Swimming Pools Using Solar or Geothermal Energy, "Ktiro" Technical Magazine, Issue 3/2009, pp. 71-76, April 2009 (in Greek).
- 7.7.10 A. Michopoulos, K. T. Papakostas, N. Kyriakis, Solar Air Conditioning, "Ktiro" Technical Magazine, Issue 2/2010, pp. 75-82, March 2010 (in Greek).
- 7.7.11 K.T. Papakostas, A. Michopoulos, Thermal Comfort in Workplaces, "Ktiro" Technical Magazine, Issue 6/2010, pp. 93-98, July 2010 (in Greek).2
- 7.7.12 A. Michopoulos, N. Kyriakis, The Influence of a Vertical Ground Heat Exchanger Length on the Electricity Consumption of the Heat Pumps, "Synchrony Techniki Epitheorisi - Mechanical", Issue 223, pp. 18-23, December 2010 (in Greek).
- 7.7.13 A. Michopoulos, Ground Source Heat Pump Systems' Applications on Modern Buildings – Selection Criteria, "Ktiro" Technical Magazine, Issue 4/2011, pp. 101-112, May 2011 (in Greek).
- 7.7.14 A. Michopoulos, Modern Boilers – Types, Installation, Maintenance, and Inspection, "Ktiro" Technical Magazine, Issue 10/2011, pp. 67-72, November - December 2011 (in Greek).
- 7.7.15 A. Michopoulos, Combined Heat and Power Technologies, "Ktiro" Technical Magazine, Issue 1/2012, pp. 75-80, January - February 2012 (in Greek).
- 7.7.16 A. Michopoulos, Modern Heating and Cooling Technologies, "Ktiro" Technical Magazine, Issue 1/2013, pp. 61-66, January - February 2013 (in Greek).
- 7.7.17 A. Michopoulos, Earth Cooling, "Ktiro" Technical Magazine, Issue 3/2013, pp. 57-62, April 2013 (in Greek).
- 7.7.18 A. Michopoulos, Energy losses on air-ducts and water-pipelines, "Ktiro" Technical Magazine, Issue 5/2013, pp. 53-60, June 2013 (in Greek).
- 7.7.19 A. Michopoulos, Modern systems for domestic hot water production, "Ktiro" Technical Magazine, Issue 7/2013, pp. 65-70, September 2013 (in Greek).
- 7.7.20 A. Michopoulos, Combined systems for heating and domestic hot water production, "Ktiro" Technical Magazine, Issue 9/2013, pp. 53-58, November-December 2013 (in Greek).

- 7.7.21 K.T. Papakostas, A. Michopoulos, *Air-Conditioning Systems – Selection criteria*, “Ktiro” Technical Magazine, Issue 5/2014, pp. 67-**, June 2014 (in Greek).
- 7.7.22 A. Michopoulos, *Energy Upgrade Solutions for the Multifamily Residential Buildings*, “Ktiro” Technical Magazine, Issue 8/2014, pp. 81-86, October 2014 (in Greek).
- 7.7.23 A. Michopoulos, *Energy Audits*, “Ktiro” Technical Magazine, Issue 1/2015, pp. 73-80, January-February 2015 (in Greek).

8 Participation in research projects

- 8.1 *Transport - Storage - Distribution of Products and Materials*
Funded by: Hellenic Ministry of Development
Coordinator: Parabolic Geometry Laboratory of A.U.Th.
Duration: 1999-2006
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.2 *Training Instructors on entrepreneurship - Establishment, organization, management and development of SMEs*
Funded by: Hellenic Ministry of Development
Coordinator: Parabolic Geometry Laboratory of A.U.Th.
Duration: 1999
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.3 *Legal, tax and financial advice for the establishment operation and expansion of Greek companies in countries of Central and Eastern Europe and Balkans*
Funded by: Hellenic Ministry of Development
Coordinator: Parabolic Geometry Laboratory of A.U.Th.
Duration: 1999
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.4 *Multimedia software assessment for general needs of ODL*
Funded by: European Commission
Coordinator: University “Politechnica” of Bucharest, Parabolic Geometry Laboratory of A.U.Th.
Duration: 1999-2000
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.5 *Citizenship: European and/or national in EU and associated countries*
Funded by: European Commission
Coordinator: University “Politechnica” of Bucharest, Parabolic Geometry Laboratory of A.U.Th.
Duration: 1999-2000
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.6 *Hesiodos: Self-employment and rural youth*
Funded by: Hellenic Ministry of Employment
Coordinator: Parabolic Geometry Laboratory of A.U.Th.

- Duration: 2000
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.7 *Combating social exclusion of autistic individuals from the labor market - Autism - Hope III*
Funded by: Prefecture of Central Macedonia
Coordinator: Parabolic Geometry Laboratory of A.U.Th.
Duration: 2000
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.8 *Applied differential geometry – General relativity*
Funded by: European Commission
Coordinator: Parabolic Geometry Laboratory of A.U.Th.
Duration: 2000-2001
Scientific Responsible: Prof. Gr. Tsagas
Position: Research Assistant
- 8.9 *Characterization of exhaust particulate emissions from road vehicles*
Funded by: European Commission
Coordinator: Laboratory of Applied Thermodynamics of A.U.Th.
Duration: 2000-2003
Scientific Responsible: Prof. Z. Samaras
Position: Research Assistant
- 8.10 *Evaluation of energy audits – Part B*
Funded by: Business and Cultural Development Centre – Development Association of Macedonia
Coordinator: Process Equipment Design Laboratory of A.U.Th
Duration: 2004-2005
Scientific Responsible: Prof. N. Kyriakis
Position: Researcher
- 8.11 *Higher calorific value determination of biomass and cotton-pie*
Funded by: Epilektos Textiles S.A.
Coordinator: Process Equipment Design Laboratory of A.U.Th
Duration: 2005
Scientific Responsible: Prof. N. Kyriakis
Position: Researcher
- 8.12 *Energy audits of medium and large industrial installations*
Funded by: Business and Cultural Development Centre – Development Association of Macedonia
Coordinator: Process Equipment Design Laboratory of A.U.Th
Duration: 2004-2009
Scientific Responsible: Prof. N. Kyriakis
Position: Researcher
- 8.13 *Innovative methods for the building management using network services*
Funded by: Hellenic Ministry of Education
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- Coordinator: Laboratory of Heat Transfer and Environmental Engineering of A.U.Th.
Duration: 2005-2007
Scientific Responsible: Ass. Prof. K. Karatzas
Position: Researcher
- 8.14 *Integration of solar thermals in buildings - New high efficiency solar collectors, solar air conditioning, seasonal thermal storage, optimal design and integrated energy management*
Funded by: Hellenic Ministry of Development
Coordinator: Sol Energy S.A., Process Equipment Design Laboratory of A.U.Th., National Center for Scientific Research
Duration: 2003-2007
Scientific Responsible: Prof. N. Kyriakis (A.U.Th. part)
Position: Researcher
- 8.15 *Cerium effect on emissions and efficiency of hot water boilers*
Funded by: BIOCEL S.A.
Coordinator: Process Equipment Design Laboratory of A.U.Th
Duration: 2008
Scientific Responsible: Prof. N. Kyriakis
Position: Researcher
- 8.16 *Reforming of the undergraduate studies' program of the Faculty of Mechanical Engineering of A.U.Th*
Funded by: Hellenic Ministry of Education
Coordinator: Laboratory of Heat Transfer and Environmental Engineering of A.U.Th.
Duration: 2003-2008
Scientific Responsible: Prof. N. Moussiopoulos
Position: Researcher
- 8.17 *Heating and cooling loads estimation of the A.U.Th. campus buildings*
Funded by: Thessaloniki's Natural Gas Corporation S.A.
Coordinator: Process Equipment Design Laboratory of A.U.Th
Duration: 2008-2010
Scientific Responsible: Prof. N. Kyriakis
Position: Senior Researcher
- 8.18 *Full scale A/C system design for the teaching rooms of Engineering School, based on absorption units*
Funded by: Engineering Retirement Fund
Coordinator: Process Equipment Design Laboratory of A.U.Th
Duration: 2009-2010
Scientific Responsible: Prof. N. Kyriakis
Position: Senior Researcher
- 8.19 *Study of the energy performance of public buildings and open spaces in the Municipality of Servia, Prefecture of Kozani and proposals for the enhancement of their energy behavior*
Funded by: Municipality of Servia
Coordinator: Laboratory of Building Construction and Physics of A.U.Th.
Duration: 2009-2010
-

Scientific Responsible: Lecturer A. Tsikaloudaki

Position: Senior Researcher

8.20 *Heating and cooling loads estimation of AHEPA complex*

Funded by: AHEPA University Hospital

Coordinator: Process Equipment Design Laboratory of A.U.Th

Duration: 2009-2010

Scientific Responsible: Prof. N. Kyriakis

Position: Senior Researcher

8.21 *Research results exploitation in the field of thermal and physical process*

Funded by: Research Committee of A.U.Th

Coordinator: Process Equipment Design Laboratory of A.U.Th

Duration: 2011-2012

Scientific Responsible: Prof. N. Kyriakis

Position: Senior Researcher

8.22 *Ground source heat pump systems for nearly zero energy buildings: Energy, environmental and techno-economic assessment in Cyprus*

Funded by: Research Promotion Foundation of Cyprus

Coordinator: Cyprus University of Technology

Duration: 2013-2015

Scientific Responsible: Ass. Prof. Th. Zachariadis

Position: Senior Researcher

9. Memberships

- Member of the Technical Chamber of Greece (TCG), 2004.
- Member of the Institute of Solar Technology (IST), 2005.
- Member of the Union of Mechanical and Electrical Engineers of Northern Greece, 2005.
- Member of the Hellenic Union of Mechanical and Electrical Engineers, 2006.
- Member of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), 2007.
- Junior Member of International Institute of Refrigeration (IIR), 2009-2012.
- Member of European Technology Platform on Renewable Heating & Cooling, (RHC-Platform), Geothermal Technology Panel, 2010.

10. Participation in Scientific Committees and Working Groups

- Member of Organizing Committee of 8th National Conference of Renewable Energy Sources of Institute of Solar Technology (2005-2006).
- Member of Scientific Committee of 10th National Conference of Renewable Energy Sources of Institute of Solar Technology (2014).
- Member of Auditing Committee of Institute of Solar Technology (2007-2009).
- Treasurer of Institute of Solar Technology (2009-2014).
- Member of Executive Board of Institute of Solar Technology (2014-now).
- Member of Working Group of Technical Chamber of Greece – Central Macedonia Section on the field of “Geothermy”, (2011-2012).
- Colleague of the editorial board of the technical magazine “KTIRIO” (2012-now).
- Member of the scientific editorial board of the electronic journal “e-Technologia” (2012-now).

- Member of management committee of TU-1405 Cost Action, and Vice-Chair of Working Group 2; “Energy performance assessment of shallow geothermal energy applications in buildings and infrastructures” (2015-now).

11 Referee/Reviewer

- Applied Energy (ISSN: 0306-2619)
- Applied Thermal Engineering (ISSN: 1359-4311)
- Energy (ISSN: 0360-5442)
- Energy Conversion and Management (ISSN: 0196-8904)
- Energy Efficiency (ISSN: 1570-646X)
- Geothermal Energy (ISSN: 2195-9706)
- International Journal of Heat and Mass Transfer (ISSN: 0017-9310)
- International Journal of Sustainable Energy (ISSN: 1478-6451)
- Journal of Architectural Engineering Technology (ISSN: 2168-9717)
- Scientific Research and Essays (ISSN: 1992-2248)
- Sustainability (ISSN: 2071-1050)
- Geothermics (ISSN: 0375-6505)

12 Awards/Honours

- Hellenic State Scholarships Foundation (I.K.Y.), Postdoctoral research scholarship (2010-2011).
- Research Grant from the Republic of Cyprus (2012-2013).