



Dr Emmanuel S. Karapidakis **Electrical and Computer Engineer**

Dean - School of Engineering

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1. Studies

1.1 Academic Education

9/1997: ***Diploma in Electrical and Computer Engineering***
National Technical University of Athens (NTUA)

10/2003: ***PhD, Contribution of Computational Intelligence for on-line Dynamic Security Assessment of Power Systems with high-RES Penetration.***
Department of Electrical and Computer Engineering
National Technical University of Athens (NTUA)

1.2 Seminars

- 2000: «*Industrial Monitoring and Control Systems*», 300 Hours, IEKEM, Technical Chamber of Greece.
- 2002: «*Operational Research Methods for the design and implementation of private and public construction projects*», 450 Hours, IEKEM, Technical Chamber of Greece.
- 2003: «*Electronic Submission of Monitoring Reports*», EYD-EPAN, Ministry of Development.
- 2009: «*Microsoft Project Management*», Hellenic Business Administration Association, EEDE.
- 2010: «*Complete studies of Medium to Low Voltage Substations* », VET Center, Schneider Electric.

1.3 Languages

English: Level C2 (Proficiency)

2. Professional Experience

2.1 Professional Carrier

2022 - Today: ***President of Board***
Hellenic Association of Energy Storage Systems (HAESS)

2021 - Today: ***Director***
Institute of Energy, Environment and Climate Change (IEECC)
University Research and Innovation Centre (URIC-HMU)

2019 - Today: ***Dean***
School of Engineering
Hellenic Mediterranean University

- 2021 - Today:** *Professor*
 Department of Electrical & Computer Engineering (ECE)
 Hellenic Mediterranean University (HMU)
- 2012 - 2021:** *Associate Professor*
 Department of Electrical & Computer Engineering
- 2005 - 2012:** *Assistant Professor*
 Technological Educational Institute of Crete
 Team Leader of Renewable Energy Sources Section
- 2003 - 2005:** *Evaluation & Implementation Manager*
 ANK Company for Support & Development of Cretan Enterprises Ltd
- 2001- 2002:** *Military Service as Air-Forces T-T Engineer.*
- 1997- 2001:** *Research Assistant*
 Institute of Communication and Computer Systems
 National Technical University of Athens

2.2 Administrating Positions

- 2003 - 2005:** *Project Evaluation Manager, ESPA 2001-2007, Region of Crete, Ministry of Development.*
- 2003 - 2006:** *Team Member, Energy, Industry and New Technologies Group, Technical Chamber of Greece, East Crete's Branch.*
- 2006 - 2009:** *Team Leader, Energy, Industry and New Technologies Group, Technical Chamber of Greece, East Crete's Branch.*
- 2009 - 2012:** *Team Member, Energy, Industry and New Technologies Group, Technical Chamber of Greece, East Crete's Branch.*
- 2011 - 2015:** *Member of Board, Regional Council of Innovation, Region of Crete.*
- 2015 - 2017:** *Member of Board, Energy Planning Council, Region of Crete.*
- 2015 - 2017:** *Team Member, Consulting Group, ISLE-PACT, Crete Region Energy Centre..*

2.3 Research and Development (R&D) Projects

@ National Technical University of Athens (NTUA)

1. Participation from 2/1/1997 to 31/5/1999 to the main researching group of the European financed project, entitle «**Advanced Control Advice for Power System with large scale Integration of Renewable Energy Sources**», Project JOR3-CT96-0119.
2. Participation from 1/3/2000 to 17/4/2001 to the main researching group of the European financed project, entitle «**MORE CARE**», Project code - 63/262.
3. Participation from 1/8/1999 to 30/9/1999 to the main researching group of the European financed project, entitle «**Electricity Tariffs and Embedded Renewable Generation**», Project code - 63/215.
4. Participation from 2/6/1999 to 31/7/1999 to the main researching group of the European financed project, entitle «**Lighting Protection of Wind Turbines – Further Work**», Project code - 63/228.
5. Participation from 23/6/2000 to 31/10/2000 to the main researching group of the European financed project, entitle «**Dissemination of the Advance Control Technologies for Isolated Power Systems with Increased RES Penetration**», Project code - 63/252.

@ Technological Institute of Crete (TEIC)

6. Project Manager from 1/9/2006 to 31/8/2007 to the subcontract of Technological and Educational Institute of Crete in research project «**Encouragement, Growth of Business Spirit and Cultivate Enterprise at TEIC**» K.Π.3.1.2.B of EPEAEK II, MIS99479 - SAE2006SE24530065.
7. Scientific Manager from 1/9/2006 to 31/3/2008 to the subcontract of Technological and Educational Institute of Crete in research project “PABET-NE” project code 05ΠBK09 and title «**Development of advance energy management system, electric energy storage and optimization of total production**».
8. Participation from 01/6/2006 to 31/10/2007 to the main researching group of the European financed project, entitled «**Development of an interactive vocational Web training tool for the take-off of the building energy performance**», Project code EEBD - SAVE Programme, Intelligent Energy Europe EIE/2003-143.
9. Participation from 15/10/2009 to 15/10/2010 to the main researching group of the European financed project, Intelligent Energy – Europe (IEE), titled «**COOL ROOFS**», Project code IEE/07/475/SI2.499428.
10. Coordinator and Scientific Manager from 1/9/2008 to 31/8/2011 Intensive Summer Courses of the European financed project, entitled «**Small Scale Renewable Energy Sources and Energy Saving**» implemented by five (5) European Countries (UK, Germany, Romania, Czech Republic, Greece) within the Intensive Programmes (ERASMUS) - **100,000€**.
11. Scientific Manager from 1/9/2010 to 31/8/2011 of the European financed project, entitled «**PV-LaSIREs: PV Large Scale integration in Island grids with currently high-RES penetration**» within bilateral (Greece-France) project of PV ERA NET - **150,000€**.
12. Scientific Manager from 4/1/2010 to 31/12/2010 of the Regional (Technical Chamber of Crete) financed project, entitled «**Sort-term and Long-term Benefits and Impacts of Large-Scale RES Installations in Crete's Power System**» - **50,000€**.
13. Scientific Manager from 1/5/2010 to 31/4/2013 of Intelligent Energy for Europe IEE - SAVE, entitle «**REE_TROFIT - Training on Renewable Energy solutions and energy Efficiency in reTROFITting**» implemented by six (6) European Countries - **200,000€**.
14. Scientific Manager from 1/1/2012 to 30/06/2016 of project entitled: «**Energy Auditors Training**» - **34,540€**.

15. Scientific Manager & Project Coordinator from 1/2/2013 to 31/4/2016 of National Archimedes Programme, entitle «**Research and Development of a real time Energy and Power Management for Crete's Power System with High-RES Penetration**» implemented by three (3) universities' collaboration - **85,000€**.
16. Scientific Manager from 15/5/2017 to 15/10/2018 of Public Programmatic Contract, entitled: «**Research and Development of Pilot Application for Energy Enhancement of Primary Health Care in the Region of Crete**» 7th Health Region - **74,400€**.
17. Scientific Manager from 15/6/2018 to 15/6/2020 of Public Programmatic Contract, entitled: «**Research for the Energy Efficiency and Energy Upgrade of all the Schools' Buildings of Malevizi Municipality**», Malevizi Municipality - **74,400€**.
18. Scientific Manager from 25/7/2018 to 25/01/2019 of Public Programmatic Contract, entitled: «**Research and Feasibility Study for Net-Metering and Virtual Net-Metering in all the Municipalities' Buildings of Crete**», Region of Crete - **186,000€**.
19. Scientific Manager & Project Coordinator from 1/11/2016 to 31/10/2020 of KA2 Sector Skills Alliances, entitled: «**Geothermal & Solar Skills in Continuous Vocational Educational Training**» implemented by four (4) European Countries and (12) twelve partners (Total Project Budget: **1,300,000€**).

@ Hellenic Mediterranean University (HMU)

20. Scientific Manager from 15/6/2019 to 15/11/2019 of Public Contact, entitled: «**Investigation of Existing Gen-Sets Contribution in Secondary and Tertiary Reserves in Crete's Power System**» Distribution System Operator (HEDNO) - **24,552€**.
21. Scientific Manager from 17/12/2020 to 16/12/2021 of Public Programmatic Contract, entitled: «**Holistic Energy Analysis and Strategic Energy Planning of Olympic Athletic Centre of Athens O.A.K.A.**», OAKA - **200,000€**.
22. Scientific Manager from 8/10/2021 to 30/06/2022 of Public Contact, entitled: «**Research and Analysis of the Maximum Capacity Limits of Future Renewables (RES) and Energy Storage (ESS) in Crete Island**» με την Regulatory Authority of Energy (RAE) - **29,500€**.
23. Scientific Manager from 14/02/2022 to 31/12/2022 of Public Programmatic Contract, entitled: «**Consulting Services on Energy Saving in Municipality Buildings**», Emmanouil Pappa Municipality - **18,500€**.
24. Scientific Manager from 29/06/2021 to 28/12/2023 of Public Programmatic Contract, entitled: «**Strategic Energy and Environmental Planning of Phaistos Municipality**» Phaistos Municipality - **37,200€**.
25. Scientific Manager from 1/08/2021 to 31/07/2023 of Private Contact, entitled: «**Research, Analysis and Planning of Smart Energy Systems with Renewables (RES) and Energy Storage (ESS)**», DYTIKOS Company - **40,000€**.
26. Scientific Manager from 15/09/2021 to 15/03/2023 of a project under Common European Facility (CEF) entitled: «**ELECTRIPORT - Alternative maritime power in the Port of Heraklion**» - **92,990€**.
27. Scientific Manager & Project Coordinator from 1/3/2024 to 28/2/2028 of ERASMUS+ Partnership for Excellence - Centres of Vocational Excellence, entitled: «**SEBCoVE - Smart Electricity for Buildings - Centers of Vocational Excellence**» implemented by seven (7) European Countries and (20) twenty partners (Total Project Budget: **2,900,000€**).

2.4 Construction Engineering Experience

Has Participated in several construction projects with significant investment interest and high budgets.

During the cooperation with «Consulting Engineering A.D.K. Ltd» company:

- ✓ *Evaluation of Electromechanical Studies for ERRIKOS-DINAN pile, (1998).*
- ✓ *Electromechanical Study of storehouses at Basiliadis seaport, Piraeus, (1999).*
- ✓ *Participation in the technical consulting project of Aposelemi's penstocks, Heraklion Crete, (1999).*
- ✓ *Participation in the construction study of "FERRON-KASTANEON" National Road, (1999).*
- ✓ *Preliminary construction study editing for student dormitories of university of Alexadroulopis, Thrace, (2000).*
- ✓ *Participation in the construction study of Karpathos Aerodrome Ancillary Services, (2001).*
- ✓ *Participation to construction study of Athletic Settlements "ELLINIKOY", (2002).*
- ✓ *Participation in the follow-up construction study of Kalamata's train station, (2003).*

During the cooperation with «AKTER Ltd» construction company:

- ✓ *Participation in the construction study of new Hyper-Market with underground garage, Petrou Ralli Str, Rendi region, (2002).*
- ✓ *Participation in the construction study of Hangars at El. Benizelos Airport, (1999).*
- ✓ *Participation in the follow-up construction study of Athens Music Palace – Second Phase, (2002).*
- ✓ *Participation in the construction study of Olympic Settlements for modern pentathlon at Goudi region, (2002).*

2.5 Consulting Engineering Experience

During the cooperation with «Concept Ltd» company, he has implemented several private consulting projects, which have been financed by the following national programs:

- ✓ *National Development Laws (N.2601/98 & N.3299/2004)*
- ✓ *National Regional Corporate Programs 2000 – 2006, 2007 - 2013*
- ✓ *Action 2.9.2, «Funding Support of Environment Plans»*
- ✓ *Action 2.7.1, «Business plan of very small and small sized enterprises»*
- ✓ *Action 2.1.3, «Financial incentives for the implementation of private energy investments for Conservation-Cogeneration-Substitution of conventional energy and Renewable Energy Sources»*
- ✓ *Action 7.3.4, «Development and Promotion of new materials, new technologies and new uses of raw mineral resources»*

2.6 Academic Educational Experience

Lecturing of the following courses at Dual-Department Postgraduate (MSc) Program, entitled **Energy Systems**:

1. **Energy System Synthesis**
2. **Energy Economy**
3. **Smart Grids and Dispersed Generation**

Lecturing of the following courses at Dual-Department Postgraduate (MSc) Program, entitled **MBA for Engineers**:

4. **Capital Budgeting and Project Evaluation**
5. **Decision Making and Risk Assessment**

Lecturing of the following courses in Natural Resources and Environmental Engineering Department:

6. **Ενεργειακή Οικονομία**, του 5^{ου} εξαμήνου (Θεωρησ Departmentia)
7. **Σχεδιασμός & Διαχείριση Συστημάτων Α.Π.Ε.**, του 7^{ου} εξαμήνου (Θεωρία-Εργαστήριο)
8. **Τεχνολογίες Σύζευξης Ενεργειακών Συστημάτων**, του 7^{ου} εξαμήνου (Θεωρία-Εργαστήριο)

Lecturing of the following courses in Electrical Engineering Department:

9. **Power Systems I & II**

Lecturing of the following courses in Electrical and Computer Engineering Department:

10. **Introduction to Power Systems**
11. **Power Systems Analysis**
12. **Power Systems Dynamics**

Lecturing in the International Intensive University Courses:

13. BOVA postgraduate course, «**Renewable Energy Sources**», Lithuanian University of Agriculture, Kaunas, Lithuania.
14. ERASMUS IP Project, «**Economics of Sustainable Energy with Clean Energy Point of View**», Yasar University Faculty of Economics and Administrative Sciences, Izmir, Turkey.

- Supervisor in more than one hundred (100) Undergraduate Dissertations and more than thirty (30) Postgraduate Dissertations.
- Main Supervisor of six (6) PhD Candidates.
 1. **Thesis Title:** Research and Development of an Enhancing the Reliability and Resilience Method of Electric Power Systems.
 2. **Thesis Title:** Contribution to the Development of a Holistic Energy and Environmentally Sustainable Management Model in microgrids, using Technological Information and Communication Systems (smart grids).
 3. **Thesis Title:** Development of an innovative and energetically sustainable holistic model for upgrading existing school complexes.
 4. **Thesis Title:** Contribution to the Analysis of the Optimal Operation of Smart Distribution Networks with High Penetration of RES and Electric Vehicles.

5. **Thesis Title:** *Research and development of a method to effectively address the challenges that electric vehicle charging will bring to the Electric Power Systems.*
6. **Thesis Title:** *Contribution to holistic strategic energy planning and the development of a sustainable energy transition action plan for the Region of Crete.*

- Opponent in two (2) international PhD Dissertation Defense.

@Estonian University of Life Sciences:

PhD Candidate: Kaupo Toom

Thesis Title: *«Possibilities for Balancing Wind Generators Output Power».*

Supervisor: Andres Annuk

Opponent: Emmanuel Karapidakis

Defense Date: 18.12.2012, Tartu, Estonia

PhD Candidate: Alo Allik

Thesis Title: *«Design of distributed energetics solution based on the increasing of direct consumption of electricity generated from wind and solar energy».*

Supervisor: Andres Annuk

Opponent: Emmanuel Karapidakis

Defense Date: 30.08.2016, Tartu, Estonia

3. Scientific Groups – Chambers

1. *President of Board, H.A.E.S.S. since February of 2022, (Hellenic Association of Energy Storage Systems).*
2. *Member of Technical Chamber of Greece (T.E.E.) since February of 1998, (member ID 78722).*
3. *Member of Institute of Electrical and Electronics Engineers (IEEE) since December of 1999 (member ID 41263507).*
4. *Chairman of «Energy & New Technologies» committee for East Crete region of Technical Chamber.*

4. Software Knowledge

- *PowerWorld, Power Systems Simulator (version 23).*
- *RETScreen.*
- *Matlab.*
- *LEAP, Long-range Energy Alternative Planning software*
- *HOMER, Software for microgrid and distributed generation power system design and optimization*
- *Computer Design Systems (CAD), AutoCAD.*
- *Professional experience of Visual Basic.*

Indexing

Scopus (accessed 1/10/2024)

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1,108

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