

Curriculum Vitae



Dr Emmanuel S. Karapidakis
Electrical and Computer Engineer
Assistant Professor
Technological Educational Institute of Crete
3 Romanou Street., 73133, Chania, Crete, Greece
Tel: ++30 28210 23076, ++30 6937298316
E-mail: karapidakis@chania.teicrete.gr

1. Studies

- 22/10/1997: **Diploma in Electrical and Computer Engineering**
National Technical University of Athens
- 22/10/2003: **PhD Thesis, «Contribution of Computational Intelligence for on-line Dynamic Security Assessment of Power Systems»**
Department of Electrical and Computer Engineering
National Technical University of Athens

2. Professional Experience

2.1 Professional Carrier

- 2005 - Today:** **Assistant Professor**
Technological Educational Institute of Crete
Team Leader of Renewable Energy Sources Section
Member of Department Council
- 2003 - 2005:** **Evaluation & Implementation Manager**
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 Project Implementation Experience

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.
6. Supervision 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.II.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 05IIBK09 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. 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).
10. Scientific Manager from 1/5/2010 to 31/4/2013 of Intelligent Energy for Europe IEE - SAVE, entitled «**REE_TROFIT - Training on Renewable Energy solutions and energy Efficiency in reTROFITting**» implemented by six (6) European Countries.
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.
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**».
13. Participation from 1/3/2011 to 31/5/2011 to the main researching group of the private financed project, entitled «**Impact Investigation of High Penetration Level of Wind Power in Crete's Power System**», by YDROAIOLIKI company.
14. Participation from 2/1/2011 to 31/10/2013 to the main researching group of the private financed project, entitled «**Impact Investigation of High Penetration Level of Wind Power in Crete's Power System**», by TERNA ENERGI AKI company.

He was Investment Implementation Inspector since March of 2003 till end of 2005 for the subsidized programs of Crete region (3rd Community Operational Framework Programme "Competitiveness").

Since August of 2003, he is referee and reviewer of Greek submitted proposals within, Financial Incentives for the Implementation of Private Energy Investments for Conservation-Cogeneration-Substitution of Conventional Energy and Renewable Energy Sources.

Additionally, he is Energy Auditor (ID: 4674) since May 2011.

2.3 Construction Engineering Experience

He has participated in several construction projects with significant investment interest and high budgets.

During the cooperation as Electrical Engineer with «AKTER Ltd» construction company:

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

2.4 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
- ✓ 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»
- ✓ Action 2.2.2, «Quality modernization of accommodations»
- ✓ Action 2.2.3, «Business Plans of SMEs of All Tourist Sections»

3. Scientific Groups – Chambers

1. Member of Technical Chamber of Greece (T.E.E.) since February of 1998, (member ID 78722).
2. Member of Institute of Electrical and Electronics Engineers (IEEE) since 1999 (ID 41263507).
3. Energy Investments Referee, since August of 2003, Ministry of Development, Greece.
4. Chairman of «Energy & New Technologies» committee for East Crete region of Technical Chamber.
5. Member of Greek Artificial Intelligence Association EETN.
6. Member of North – Eastern Europe Energy Institute IENE.

4. Software Knowledge

- Computer Design Systems (CAD), AutoCAD.
- Professional experience of Visual Basic 5 & 6.
- MS Office Applications.
- PowerWorld Simulator (version 15)
- RETScreen (version 3.2), Matlab (version 7.0.1).
- LEAP, Long-range Energy Alternative Planning software

5. Published Scientific Work

5.1 Books

1. N.D. Hatziargyriou and E.S. Karapidakis, (2002). *Machine Learning Applied to Power System Dynamic Security Assessment Intelligent Systems*, Control and Electric Power Systems, Volume VI, pp. 35-62. Edited by Cornelius T. Leondes, CRC Press.
2. Emmanuel S. Karapidakis, (2009). *Computational Methods for Operation Management on Power Systems*, Computer Applications in Power Systems, Lecture Notes in Electrical Engineering, 2009, Vol. 28, pp. 815-822. Edited by Springer Verlag.
3. Emmanuel S. Karapidakis, (2010). *Wind Power Impact on Power System Dynamic Performance*, Wind Power, ISBN 978-953-7619-81-7. Edited by S.M. Mueeen, Kitami Institute of Technology, Kitami, Hokkaido, Japan.
4. Yiannis A. Katsigiannis, Pavlos S. Georgilakis and Emmanuel S. Karapidakis, (2010). *Genetic Algorithm Solution to Optimal Sizing Problem of Small Autonomous Hybrid Power Systems*, Lecture Notes in Artificial Intelligence, 2010, Volume 6040, pp.327-332, DOI: 10.1007/978-3-642-12842_4_38. Edited by R. Goebel, J. Siekmann, and W. Wahlster.

5.2 International Journals

1. J.A. Pecos Lopes, N. Hatziargyriou, M. Vasconcelos, E. Karapidakis and J. Fidalgo, (1999). *On-Line Dynamic Security Assessment of Isolated Networks Integrating Large Wind Power Production*, Wind Engineering, Vol. 23, No. 2, pp 107-117.
2. Gigantidou, J. Stefanakis, E. Karapidakis and N. Hatziargyriou, (1999). *CARE Control Advice for Renewable Energy Power Grids: Installation and Evaluation*, Wind Engineering, Vol. 23, No. 2, pp 119-127.
3. E.S. Karapidakis and N.D. Hatziargyriou, (2002). *On-Line Preventive Dynamic Security of Isolated Power Systems Using Decision Trees*, IEEE Transactions on Power Systems, Vol. 17, No. 2.
4. E.S. Karapidakis, (2007). *Machine Learning for on-line Frequency Estimation*, Elsevier, Applied Soft Computing Journal, Vol. 7, No. 1, pp 105-114.
5. A.A. Tsave and E.S. Karapidakis, (2008). *Landfill Gas (LFG) Plants: An application on energy regarding environmental impact*, Journal of Optoelectronics and Advanced Materials, Vol. 10, No. 5, pp 1277 – 1281.
6. D. Kolokotsa, A. Psomas, E.S. Karapidakis, (2009). *Urban heat island in southern Europe: The case study of Hania-Crete*, Solar Energy 83 (10), pp 1871-1883.
7. K. Papadogiannis, E.S. Karapidakis, N. Hatziargyriou, (2009). *Cost Allocation of Losses in Autonomous Power Systems with High Penetration of RES*, WSEAS Transactions on Power Systems, Issue 6, Volume 4, pp 210-220.

8. Y. Katsigiannis, P. Georgilakis, E. Karapidakis, (2010). Multiobjective Genetic Algorithm Solution to the Optimum Economic and Environmental Performance Problem of Small Autonomous Hybrid Power Systems with Renewables, IET Renewable Power Generation, 2010, Vol. 4, Iss. 5, pp 404–419, DOI: 10.1049/iet-rpg.2009.0076
9. Karapidakis, E. S.; Tsave, A. A.; Soupios, P. M.; Katsigiannis, Y. A., (2010). Energy efficiency and environmental impact of biogas utilization in landfills. Int. J. Environ. Sci. Tech., 7 (3), pp 599-608.
10. Katsigiannis, Y.A., Georgilakis, P.S., Karapidakis, E.S., (2010). Multiobjective genetic algorithm solution to the optimum economic and environmental performance problem of small autonomous hybrid power systems with renewables. IET Renewable Power Generation, 4 (5), pp. 404-419.
11. Katsigiannis, Y.A., Georgilakis, P.S., Karapidakis, E.S., (2010). Genetic algorithm solution to optimal sizing problem of small autonomous hybrid power systems. Lecture Notes in Computer Science 6040 LNAI, pp. 327-332.
12. Emmanuel S. Karapidakis, Yiannis A. Katsigiannis, Pavlos S. Georgilakis, Emmanuel Thalassinakis, (2011). Generation expansion planning of Crete power system for high penetration of renewable energy sources. Materials Science Forum, Vol. 670, pp 407-414, DOI:10.4028/www.scientific.net/MSF.670.407

5.3 Papers in Refereed Conferences

Moreover, there are more than thirty (30) papers presented in refereed conferences.