

CURRICULUM VITAE
M.Sc. KONSTANTINOS G. KARAKOULIDIS

Electrical & Computer Engineer
Lecturer of TEI Kavala, Greece

PERSONAL INFORMATION

Place of Birth	Eleftheroupoli, Kavala, Greece.
Home Address	Filippou 2, 65 403 Kavala, Greece.
Office Address	Kavala Institute of Technology, Department of Electrical Engineering, Ag. Loukas, 65404 Kavala, Greece. Tel. 00302510462273
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EDUCATION

Kavala Institute of Technology (Kavala, Greece October 1981 – June 1984) GPA 8.8/10

Department of Electrical Engineering
Bachelor of Science in Electrical Engineering T.E.
3-year program

Aristotle University of Thessaloniki (Thessaloniki, Greece December 1984 – November 1988)

GPA 7.15/10

Department of Electrical and Computer Engineering
Bachelor of Science in Electrical Engineering
5-year program

S.E.L.E.T.E. of Thessaloniki (Thessaloniki, Greece March 1993 – March 1994) GPA 8.0/10

Bachelor of Educational Studies
1-year program

Democritus University of Thrace (Xanthi, Greece November 2000 – November 2002) GPA 8.35/10

Department of Electrical and Computer Engineering
Master Science in Electrical Engineering
Thesis: 'Breakdown Phenomena on Insulating Material Surfaces'

WORK EXPERIENCE

- 20/2/1990 – 20/9/1990: 732 Department of Military Projects of Xanthi, as Electrical Engineer.
- 6/5/1991 – 31/8/1995: Municipal Enterprise of Water Supply of Kavala (D.E.Y.A.K.) as Electrical Engineer in projects of Wastewater Treatment Installations, Water Supply and Sewage Pumping Stations, Medium Voltage Substations, Reactive Power Compensation, Automation with PLC and Cathodic Protection of Water Pipelines.
- 1/9/1995 – 8/3/2005: Teacher at high school.

TEACHING EXPERIENCE

Kavala Institute of Technology (Greece) Department of Electrical Engineering (October 1990 – March 2005)

Academic Year 1990/91 – 1996/97.

As Professor of Application with annual contract of the Department of Electrical Engineering, TEI Kavalas taught the modules: **Electrical Installations II Theory, Electrical Energy Systems II Laboratory, Electrical Installations I Laboratory, Lighting Technique Theory, CAD design I Laboratory, PLC Laboratory.**

Academic Year 1997/98 – 2004/05.

As Adjoined Lecturer with annual contract of the Department of Electrical Engineering, TEI Kavalas taught the modules: **CAD design I&II Laboratory, PLC Laboratory, High Voltage Technology Laboratory, Electrical Energy Systems II Laboratory, Electrical Machines I&II Laboratory.**

K.E.K of T.E.I. Kavalas (12/9/1994 – 16/12/1994)

75 hours in the seminar realized by K.E.K. of T.E.I. Kavalas with the topic: «Repatriate Training on Electrical Installations».

I.E.K.E.M. of T.E.E. A.E. (1995)

12 hours in the seminar realized by I.E.K.E.M. T.E.E. A.E. with the topic: «Organization of Industrial Production».

K.E.K of T.E.I. Kavalas (1999)

45 hours in the seminar realized by K.E.K. of T.E.I. Kavalas with the topic: «Computer Aided Design».

Kavala Institute of Technology (Greece) Department of Electrical Engineering (9/3/ 2005 – today).

Professor of Application of the Department of Electrical Engineering, TEI Kavalas taught the modules: Power Electronics Laboratory, Electrical Drives Laboratory, Electrical Machines I&II Laboratory and Theory, Electrical Machines for Mechanical Engineers Theory.

PARTICIPATION IN SCIENTIFIC RESEARCH PROGRAMS

- 1/7/2008 – 30/6/2010: “Techno economical analysis of hybrid system for covering the energy needs of the laboratory of electrical machines – TEI Kavalas” was financed from funds of Research Funds of T.E.I. Kavalas, Project Leader K. Karakoulidis.

LECTURE NOTES

- 9/3/2005– today : Lecture notes for the students of the 3rd, 4th and 6th semester of the Academic Year of the Department of Electrical Engineering, TEI Kavalas, topics: Electrical Drives Laboratory, Electric Machines I & II Laboratory.

SUPERVISION OF DISSERTATIONS - MEMBER OF THE EXAMINATION BOARD

- 9/3/2005– today : Supervisor for the completion of a great number of dissertations.
- 9/3/2005– today : Member of the Examination Board, responsible for the assessment of a large number of projects and dissertations.

LABORATORY EXPERIENCE

- As responsible of the Electrical Machines Lab of the Department of Electrical Engineering of TEI Kavallas, contributed to the update and improvement of the lab equipments and of the organization of the particular lab.

MANAGERIAL OCCUPATIONS

- June 2000– May 2003: Member of the Board of Directors of Electrical Engineering Association Kavala – Drama.
- November 2000– November 2003: Member of the delegation of the Technical Chamber of Greece Eastern Macedonia.
- December 2001– June 2004: Member of the Board of Directors of the Kavala Port Authority S.A.
- 1/9/2007– 31/8/2010: Head of Faculty Powerful Currents, Department of Electrical Engineering, TEI Kavallas, Greece.

MEMBERSHIPS

- Member of the Technical Chamber of Greece
- Member of the Hellenic Association of Electrical & Computer Engineering

SEMINARS

1. 6/3/1991 – 12/6/1991: EL.KE.PA. KAVALLAS: Seminar of 152 hours with topic: «Information Technology».
2. 1/11/1993 – 5/11/1993: SIEMENS S.A.: Seminar with topic: «PLC».
3. 15/12/1998: REGIONAL TRAINING CENTER OF KAVALA: Seminar of 6 hours with topic: «Technical Education».
4. January – March 1999: REGIONAL TRAINING CENTER OF KAVALA: Seminar of 40 hours with topic: «Computing and Internet in Education».
5. 19/9/2002: Democritus University of Thrace attendance a conference with topics: a) Communication Networks – The Greek School Network for Education (EDUNET) – Services b) A Local Area Network Implementation c) Interface devices.

PUBLICATIONS

1. **Konstantinos Karakoulidis**, Michael G. Danikas and Paschalis Rakitzis, "Deterioration Phenomena on Polymeric Insulating Surfaces Due to Water Droplets", *Journal of Electrical Engineering*, vol. 56, no. 7-8, pp. 169-175, 2005.
2. Michael G. Danikas, Paschalis Rakitzis and **Konstantinos Karakoulidis**, "Study of Parameters related to Deterioration Phenomena Due to Water Droplets on Polymeric Surfaces", *Journal of Electrical Engineering*, vol. 57, no. 3, pp. 130-137, 2006.
3. **K. Karakoulidis**, K. Mavridis, D.V. Bandekas, P. Antoniadis, C. Potolias and N. Vordos, "Techno-economic analysis of a stand-alone hybrid photovoltaic – diesel – battery – fuel cell power system", *Renewable Energy* 36 pp. 2238-2244, 2011.
4. J. G. Fantidis, D. V. Bandekas, C. Potolias, N. Vordos, **K. Karakoulidis**, "Financial analysis of solar water heating systems during the depression: Case study of Greece", *Inzinerine Ekonomika - Engineering Economics*, Vol.23, No.1, pp.33-40, 2012.
5. Jacob G. Fantidis, Dimitrios V. Bandekas, Nick Vordos, Costas Potolias, **Kostas Karakoulidis**, "Financial Crisis and the New Data on the Wood Pellet Heating: Case Study Of Greece", *Research Journal of Applied Sciences* 7 (3) 2012 pages 138-145.
6. J. G. Fantidis, **K. Karakoulidis**, G. Lazidis, C. Potolias, D. V. Bandekas, "The study of the thermal profile of a three-phase motor under different conditions", *ARNP Journal of Engineering and Applied Sciences*, 8 (11) (2013) 892 – 899.
7. Jacob G. Fantidis, D. V. Bandekas, C. Potolias, **K. Karakoulidis**, P. Kogias. Financial Crisis in Greece, the Reason for the Replacement of Heating Diesel Systems. *American Journal of Environmental Engineering and Science*. Vol. 2, No. 1, 2015, pp. 1-6.
8. J. G. Fantidis, D. V. Bandekas, **K. Karakoulidis**, G. Lazidis, C. Potolias. "The Temperature Measurement of The Windings In a Three-Phase Electrical Motor Under Different Conditions". *Gazi University Journal of Science Part A: Engineering And Innovation*. GU J Sci Part:A 3(2): 39-44 (2015).

CONFERENCES

1. M. G. Danikas, S. Nalbantis, **K. Karakoulidis**, "Water Droplets on Polymeric Surfaces: Investigation of the Role of Various Parameters on the Flashover Voltage", 21st Nordic Insulation Symposium, June 15-17, 2009, Gothenburg, Sweden.
2. Svilen Rachev, **Konstantinos Karakoulidis**, Lyubomir Dimitrov, "Dynamic Study of Forging Fly-press Driven by Electric Induction Motor", 12th International Conference "Research and Development in Mechanical Industry", 14-17 September, 2012, Vrnjacka Banja, Serbia.

CITATIONS OF THE ABOVE PAPERS

- [1] **Konstantinos Karakoulidis**, Michael G. Danikas and Paschalis Rakitzis, "Deterioration Phenomena on Polymeric Insulating Surfaces Due to Water Droplets", *Journal of Electrical Engineering*, vol. 56, no. 7-8, pp. 169-175, 2005.
1. Fujii, Osamu, et al. "Vibration of a water droplet on a polymeric insulating material subjected to AC voltage stress." *Dielectrics and Electrical Insulation, IEEE Transactions on* 17.2 (2010): 566-571.
 2. Imano, Adolphe Moukengué, and Abderrahmane Beroual. "Study of the behavior of AC discharges of water drops on both conducting and dielectric solid surfaces." *Dielectrics and Electrical Insulation, IEEE Transactions on* 17.5 (2010): 1569-1575.

3. Danikas, Michael G., et al. "Analysis of Polymer Surface Modifications due to Discharges Initiated by Water Droplets under High Electric Fields." *World Academy of Science, Engineering and Technology* 50 (2009).
 4. Danikas, Michael G., Pavlos Ramnalis, and Ramanujam Sarathi. "A STUDY OF THE BEHAVIOUR OF WATER DROPLETS ON POLYMERIC SURFACES UNDER THE INFLUENCE OF ELECTRIC FIELDS IN AN INCLINED TEST ARRANGEMENT." *Journal of Electrical Engineering, IEE of Slovak Academy of Sci* 60.2 (2009): 94-99.
 5. Kechagia, S., M. G. Danikas, and R. Sarathi. "Water Droplets and Breakdown Phenomena on Polymer Nanocomposite Surfaces under the Influence of Uniform Electric Fields." *Malaysian Polymer Journal* 8.2 (2013): 41-47.
 6. Nagaraj, H. P., et al. "Behaviour of water droplets on polymer surface." *Properties and Applications of Dielectric Materials (ICPADM), 2012 IEEE 10th International Conference on the. IEEE*, 2012.
 7. Cheng, Yonghong, et al. "A Study of the Behaviour of Water Droplets Under the Influence of Uniform Electric Field in Epoxy Resin Samples." (2012): 196-200.
 8. Dessouky, S. S., and K. A. Helal. "Influence of Water Contents on the Electrical behavior of polymeric insulators."
 9. Danikas, M. G., P. Ramnalis, and R. Sarathi. "Experimental Results on the Behavior of Water Droplets on Polymeric Surfaces Under the Influence of Electric Fields: the Case of an Inclined Test Arrangement for PVC, Rubber and Silicone Rubber." *FUNKTECHNIKPLUS# JOURNAL* 2 (2013).
 10. Nasrat, L. S., and Saleh Aly. "Evaluation of Flashover Voltage on Hydrophobic Polymer Insulators with Artificial Neural Network." *International Journal of Electrical & Computer Engineering (2088-8708)* 2.4 (2012).
 11. Nasrat, L. S., and Saleh Aly. "Evaluation of Flashover Voltage Mechanisms on Hydrophobic Polymer Insulators with Artificial Neural Network Approach." *International Journal of Electrical and Computer Engineering (IJECE)* 2.4 (2012): 487-494.
- [2] Michael G. Danikas, Paschalis Rakitzis and **Konstantinos Karakoulidis**, "Study of Parameters related to Deterioration Phenomena Due to Water Droplets on Polymeric Surfaces", *Journal of Electrical Engineering*, vol. 57, no. 3, pp. 130-137, 2006.
12. Fujii, Osamu, et al. "Vibration of a water droplet on a polymeric insulating material subjected to AC voltage stress." *Dielectrics and Electrical Insulation, IEEE Transactions on* 17.2 (2010): 566-571.
 13. Imano, Adolphe Moukengué, and Abderrahmane Beroual. "Study of the behavior of AC discharges of water drops on both conducting and dielectric solid surfaces." *Dielectrics and Electrical Insulation, IEEE Transactions on* 17.5 (2010): 1569-1575.
 14. Danikas, Michael G., et al. "Analysis of Polymer Surface Modifications due to Discharges Initiated by Water Droplets under High Electric Fields." *World Academy of Science, Engineering and Technology* 50 (2009).
 15. Danikas, Michael G., Pavlos Ramnalis, and Ramanujam Sarathi. "A STUDY OF THE BEHAVIOUR OF WATER DROPLETS ON POLYMERIC SURFACES UNDER THE INFLUENCE OF ELECTRIC FIELDS IN AN INCLINED TEST ARRANGEMENT." *Journal of Electrical Engineering, IEE of Slovak Academy of Sci* 60.2 (2009): 94-99.
 16. Kechagia, S., M. G. Danikas, and R. Sarathi. "Water Droplets and Breakdown Phenomena on Polymer Nanocomposite Surfaces under the Influence of Uniform Electric Fields." *Malaysian Polymer Journal* 8.2 (2013): 41-47.
 17. Nagaraj, H. P., et al. "Behaviour of water droplets on polymer surface." *Properties and Applications of Dielectric Materials (ICPADM), 2012 IEEE 10th International Conference on the. IEEE*, 2012.

18. Cheng, Yonghong, et al. "A Study of the Behaviour of Water Droplets Under the Influence of Uniform Electric Field in Epoxy Resin Samples." (2012): 196-200.
19. Dessouky, S. S., and K. A. Helal. "Influence of Water Contents on the Electrical behavior of polymeric insulators."
20. Danikas, M. G., P. Ramnalis, and R. Sarathi. "Experimental Results on the Behavior of Water Droplets on Polymeric Surfaces Under the Influence of Electric Fields: the Case of an Inclined Test Arrangement for PVC, Rubber and Silicone Rubber." *FUNKTECHNIKPLUS# JOURNAL 2* (2013).
21. Nasrat, L. S., and Saleh Aly. "Evaluation of Flashover Voltage on Hydrophobic Polymer Insulators with Artificial Neural Network." *International Journal of Electrical & Computer Engineering (2088-8708)* 2.4 (2012)..
22. Nasrat, L. S., and Saleh Aly. "Evaluation of Flashover Voltage Mechanisms on Hydrophobic Polymer Insulators with Artificial Neural Network Approach." *International Journal of Electrical and Computer Engineering (IJECE)* 2.4 (2012): 487-494.
23. Zylka, Pawel. "On the surface performance of superhydrophobic silicone rubber specimens fabricated by direct replica method." *Dielectrics and Electrical Insulation, IEEE Transactions on* 21.3 (2014): 1183-1188.

- [3] **K. Karakoulidis, K. Mavridis, D.V. Bandekas, P. Antoniadis, C. Potolias and N. Vordos,** "Techno-economic analysis of a stand-alone hybrid photovoltaic – diesel – battery – fuel cell power system", *Renewable Energy* 36 pp. 2238-2244, 2011.
24. Mohammadi, M., S. H. Hosseinian, and G. B. Gharehpetian. "GA-based optimal sizing of microgrid and DG units under pool and hybrid electricity markets." *International Journal of Electrical Power & Energy Systems* 35.1 (2012): 83-92.
 25. Ismail, M. S., M. Moghavvemi, and T. M. I. Mahlia. "Techno-economic analysis of an optimized photovoltaic and diesel generator hybrid power system for remote houses in a tropical climate." *Energy Conversion and Management* 69 (2013): 163-173.
 26. Shiroudi, A., et al. "Case study: Simulation and optimization of photovoltaic-wind-battery hybrid energy system in Taleghan-Iran using homer software." *Journal of Renewable and Sustainable Energy* 4 (2012): 053111.
 27. Tanoto, Yusak, M. Santoso, and C. Massay. "Off-grid fully renewable energy with free capacity shortage for remote electrification." *Power Engineering and Optimization Conference (PEOCO), 2013 IEEE 7th International. IEEE, 2013.*
 28. Vassallo, Manuel Jesús, José Manuel Bravo, and José Manuel Andújar. "Optimal sizing for UPS systems based on batteries and/or fuel cell." *Applied Energy* 105 (2013): 170-181.
 29. Fantidis, J. G., et al. "Wind energy potential in Greece using a small wind turbine."
 30. Shiroudi, Abolfazl, et al. "Stand-alone PV-hydrogen energy system in Taleghan-Iran using HOMER software: optimization and techno-economic analysis." *Environment, Development and Sustainability*: 1-14.
 31. SEN, ROHIT. "OFF-GRID ELECTRICITY GENERATION with Renewable Energy Technologies in India." (2011).
 32. Ting, W. C., WB Wan Nik, and K. B. Samo. "Perspective of Photovoltaic in Aquaculture Application."
 33. Ursúa, Alfredo, et al. "Stand-alone operation of an alkaline water electrolyser fed by wind and photovoltaic systems." *International Journal of Hydrogen Energy* 38.35 (2013): 14952-14967.
 34. Wadi Abbas Al-Fatlawi, Ali, et al. "Technical and economic analysis of renewable energy powered stand- alone pole street lights for remote area." *Environmental Progress & Sustainable Energy* (2013).
 35. Mourmouris, J. C., C. Potolias, and Jacob G. Fantidis. "Evaluation of Renewable Energy Sources Exploitation at remote regions, using Computing Model and Multi-Criteria Analysis:

- A Case-Study in Samothrace, Greece." *International Journal of Renewable Energy Research (IJRER)* 2.2 (2012): 307-316.
36. Maheri, A., et al. "Deterministic versus Nondeterministic Design of Hybrid Renewable Energy Systems."
37. Anayochukwu, Ani Vincent, and Emetu Alice Nnene. "Simulation and Optimization of Photovoltaic/Diesel Hybrid Power Generation Systems for Health Service Facilities in Rural Environments." *Electronic Journal of Energy & Environment* 1.1 (2013).
38. Arabi, Saber. "Reliable Designing of Stand-alone PV/FC Hybrid System." *Majlesi Journal of Electrical Engineering* 7.2 (2012): 41-47.
39. Akikur, R. K., et al. "Comparative study of stand-alone and hybrid solar energy systems suitable for off-grid rural electrification: A review." *Renewable and Sustainable Energy Reviews* 27 (2013): 738-752.
40. Sen, Rohit, and Subhes C. Bhattacharyya. "Off-grid electricity generation with renewable energy technologies in India: An application of HOMER." *Renewable Energy* 62 (2014): 388-398.
41. KONG Lingguo, CAI Guowei, YANG Deyou, SUN Zhenglong. "Modeling and Coordinated Control of Grid-Connected PV Generation System With Energy Storage Devices" *Power System Technology* Vol 37 No 2 (2013).
42. Maheri, Alireza. "Multi-objective design optimisation of standalone hybrid wind-PV-diesel systems under uncertainties." *Renewable Energy* 66 (2014): 650-661.
43. Montazeri, M., H. Memarinezhad, and S. Abasi Garavand. "Environmental Impact Reduction Considering Cost Analysis Using NSGAI Algorithm through Optimal Configuration of a Collective MicroGrid (PV+ WT+ FC)." (2014).
44. Ramli, Makbul AM, Ayong Hiendro, and H. R. E. H. Boucekara. "Performance Analysis of Hybrid PV/Diesel Energy System in Western Region of Saudi Arabia." *International Journal of Photoenergy* 2014 (2014).
45. Elbaset, A. "Optimal design of a PV/fuel cell hybrid power system for the city of Brest in France." *ICGE 2014–The First International Conference on Green Energy, to be held in Sfax, Tunisia, from March 25-27, 2014..* Vol. 1. No. 1. 2014.
46. Sen, Rohit, and Subhes C. Bhattacharyya. "Renewable Energy-Based Mini-Grid for Rural Electrification: Case Study of an Indian Village." *Mini-Grids for Rural Electrification of Developing Countries*. Springer International Publishing, 2014. 203-232.
47. Chade, Daniel, Tomasz Miklis, and David Dvorak. "Feasibility study of wind-to-hydrogen system for Arctic remote locations–Grimsey island case study." *Renewable Energy* 76 (2015): 204-211.
48. Kim, Heetae, et al. "Optimal green energy management in Jeju, South Korea–On-grid and off-grid electrification." *Renewable Energy* 69 (2014): 123-133.
49. Wadi Abbas Al-Fatlawi, Ali, et al. "Technical and economic analysis of renewable energy powered stand- alone pole street lights for remote area." *Environmental Progress & Sustainable Energy* 33.1 (2014): 283-289.
50. Mathema, Preety. *OPTIMIZATION OF INTEGRATED RENEWABLE ENERGY SYSTEM–MICRO GRID (IRES-MG)*. Diss. Oklahoma State University, 2011.
51. Rudston, Jeremy. "Techno-Economic Analysis of Sustainable Energy Systems for Meeting the Energy Demand of a Greenhouse in South Australia."
52. El-Zonkoly, Amany. "Optimal placement and schedule of multiple grid connected hybrid energy systems." *International Journal of Electrical Power & Energy Systems* 61 (2014): 239-247.
53. Mohammadi, M., et al. "Micro-Grid Optimization as Grid-Connected in Pool-Based Power Market Under Pay-as-Bid and Uniform Pricing." *International Review of Electrical Engineering (IREE)* 7.2 (2012).

54. Mohammed, Omar Hazem, et al. "Optimal Design of a Stand-Alone Hybrid PV/Fuel Cell Power System for the City of Brest in France." *International Journal on Energy Conversion (IRECON)* 2.1 (2014): 1-7.
55. Fantidis, J. G., et al. "Study of a Wind/PV/Battery hybrid system at Plaka in Greece."
- [4] Fantidis J. G., Bandekas D. V., Potolias C., Vordos N., **Karakoulidis K.**, "Financial analysis of solar water heating systems during the depression: Case study of Greece", *Inzinerine Ekonomika – Engineering Economics*, Vol.23, No.1, pages 33–40, 2012.
56. del Pablo-Romero, María P., Antonio Sánchez-Braza, and Enrique Lerma. "Solar Thermal Energy Use in EU-27 Countries: Evolution and Promotion." *Alternative Energies*. Springer Berlin Heidelberg, 2013. 241-266.
- [5] Jacob G. Fantidis, Dimitrios V. Bandekas, Nick Vordos, Costas Potolias, **Kostas Karakoulidis**, "Financial Crisis and the New Data on the Wood Pellet Heating: Case Study Of Greece", *Research Journal of Applied Sciences* 7 (3) 2012 pages 138-145.
- [6] J. G. Fantidis, **K. Karakoulidis**, G. Lazidis, C. Potolias, D. V. Bandekas, "The study of the thermal profile of a three-phase motor under different conditions", *ARPJ Journal of Engineering and Applied Sciences*, 8 (11) (2013) 892 – 899.
- [7] Jacob G. Fantidis, D. V. Bandekas, C. Potolias, **K. Karakoulidis**, P. Kogias. Financial Crisis in Greece, the Reason for the Replacement of Heating Diesel Systems. *American Journal of Environmental Engineering and Science*. Vol. 2, No. 1, 2015, pp. 1-6.
- [8] J. G. Fantidis, D. V. Bandekas, **K. Karakoulidis**, G. Lazidis, C. Potolias. "The Temperature Measurement of The Windings In a Three-Phase Electrical Motor Under Different Conditions". *Gazi University Journal of Science Part A: Engineering And Innovation*. GU J Sci Part:A 3(2): 39-44 (2015).