

Curriculum Vitae of the Assistant Professor Antonios Tsikalakis

Curriculum Vitae

SURNAME	TSIKALAKIS	
NAME	Antonios	
FATHER'S NAME	GEORGE	
DATE OF BIRTH:	02 December 1979	
PHONE NUMBER:	30-2810379867/2810-379793	
E-mail:	tsikalant@hmu.gr	

Γνωστικό Αντικείμενο: Electricity Management

Assistant Professor

Personal Web-page: www.mesfia.eu

STUDIES:

15TH July 2008 : Dr. Engineer of the National Technical University of Athens. The title of the PhD Dissertation is **“Contribution in operation Scheduling in Distribution Networks with High Distributed and Renewable Energy Sources penetration and storage devices.”**

July 2002 : Diploma of Electrical and Computers Engineering from the National Technical University of Athens. Grade 8.78/10. Diploma thesis Title **“Methods for the economic evaluation of Renewable Energy Sources in Island power systems. Application to the island of Crete for the year 2000”.**

1997: Graduation from the 2nd High School of Iraklion, Crete with general grade (20/20). Beginning of studies in the School of Electrical and Computers Engineering of the National Technical University of Athens (ranking 23rd out of 200).

Language

English fluently C2-Level-Proficiency

Publications and scientific announcements

Journal Publications

[B1] A.G. Tsikalakis, N.D. Hatziaargyriou, “Environmental Benefits of Distributed Generation With and Without Emissions Trading”, *J.Energy Policy*, Vol. 35, Iss. 6, June 2007, pp 3395–3409.

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- [B2] Antonis G. Tsikalakis, Nikos D. Hatziargyriou, "Centralized Control for Optimizing Microgrids Operation", *IEEE Trans on Energy conversion*, Vol. 23, No 1, March 2008, pp 241-248.
- [B3] Antonis G. Tsikalakis, Nikos D. Hatziargyriou, Yiannis A. Katsigiannis, Pavlos S. Georgilakis, "Impact of wind power forecasting error bias on the economic operation of autonomous power systems", *J. Wind Energy*, Vol. 12 Issue 4, pp 315 – 331, May 2009.
- [B4] Nikos Hatziargyriou, Aris Dimeas, Antonis Tsikalakis, "Centralized And Decentralized Control Of Microgrids", *Int. J. of Distributed Energy Resources*, Vol. 1, No 3, July - September 2005, pp197-212.
- [B5] Yiannis A. Katsigiannis, Antonis G. Tsikalakis, Pavlos S. Georgilakis, Nikos D. Hatziargyriou, "Improved Wind Power Forecasting Using a Combined Neuro-Fuzzy and Artificial Neural Network Model", *Springer-Verlag, Lecture Notes on Artificial Intelligence (LNAI) 3955, 2006*, pp105-115.
- [B6] A.G. Tsikalakis, A.Dimeas, N. D. Hatziargyriou, J.A. Pecos Lopes, G.Kariniotakis, J.Oyarzabal, "Management Of Microgrids In Market Environment", *Int. J. of Distributed Energy Resources*, Vol. 2, No 3, July - September 2006, pp171-193, ISSN 1614-7138. (also in the Special Issue for Microgrids).
- [B7] N.D.Hatziargyriou, A.G. Anastasiadis, A.G. Tsikalakis, J.Vasiljevska, "Quantification of economic, environmental and operational benefits Due to Significant Penetration of Microgrids in a typical LV and MV Greek Network", *European Transactions on Electrical Power*, Vol 21, Issue 2, March 2011, pp 1238-1254, DOI: 10.1002/etep.392
- [B8] A.G. Tsikalakis, N.D.Hatziargyriou, "Operation of Microgrids with Demand Side Bidding and Adequacy Constraints" *European Transactions on Electrical Power* , Vol 21, Issue 2, March 2011, pp 1217-1237, DOI: 10.1002/etep.441.
- [B9] Goran Krajačić, Neven Duić, Antonis G Tsikalakis; Emmanouel Zoulias, George Caralis, Eirini Panteri, Maria da Graça Carvalho "Feed in tariffs for promotion of energy storage technologies", *J. of Energy Policy*, Vol. 39, Issue 3, March 2011, pp 1410-1425.
- [B10] O.-S. Parissis, E. Zoulias, E. Stamatakis, K. Sioulas, L. Alves, R. Martins, A. Tsikalakis, G. Caralis "Integration of Wind and Hydrogen Technologies in the Power System of Corvo Island, Azores: A Cost-Benefit Analysis", *Int. J. of Hydrogen Energy*, Vol 36, Issue 13, July 2011, pp 8143-8151.
- [B11] Antonis Tsikalakis, T. Tomtsi, N.D. Hatziargyriou, A. Poulikkas, Ch. Malamatenios, E. Giakoumelos, O. Cherkaoui Jaouad, A. Chenak, A. Fayek, T. Matar, A. Yasin, "Review of Best Practices of Solar Electricity Resources applications in selected Middle East & North Africa (MENA) Countries", *Renewable Energy And Sustainable Reviews*, Vol 15, Iss. 6, August 2011, pp 2836-2849.

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- [B12] Emmanuel Karapidakis, Antonis Tsikalakis, Yiannis Katsigiannis and Marios Moschakis, "Impact of increased RES generation on power systems dynamic performance", *Materials Science Forum*, Vol. 721 (2012), pp 185-190
- [B13] Yiannis Katsigiannis, Emmanuel Karapidakis, Antonis Tsikalakis and Em.Maravelakis, "Techno-economic and environmental evaluation of large scale PV integration in Greece", *Materials Science Forum* Vol. 721 (2012) pp 287-292.
- [B14] Marios N. Moschakis, Vasilis V. Dafopoulos, Emmanuel S. Karapidakis and Antonis G. Tsikalakis, "Analytical Assessment of DC Components Generated By Renewable Energy Resources with Inverter-Based Interconnection System due to Even Harmonics", *ISRN Renewable Energy (Open Access)*, Vol. 2012 (2012).
- [B15] Antonis G Tsikalakis, Dimitrios Routsis, Apostolos Pafilis, Konstantinos Kalaitzakis, Georgios Stavrakakis. "A Methodology Exploiting Geographical Information Systems to Site a Photovoltaic Park inside a Sustainable Community", *Intl. J. of Sustainable Energy*, Taylor and Francis, 35(2), 132-147. (2016)
- [B16] Moschakis, M., Prousalidis, J., Tsikalakis, A. G., & Karapidakis, E. S. "Effect of Power Line Conductor Resistance-to-Reactance Ratio on Voltage Magnitude during Two-Phase Faults at Electric Energy Grids". *In Materials Science Forum* (Vol. 792, pp. 316-321), June 2014.
- [B17] Karapidakis, E., Georgilakis, P., Tsikalakis, A. G., Katsigiannis, Y. A., & Moschakis, M. "Dynamic performance assessment of wind energy pump storage units in Crete's power system". *In Materials Science Forum* (Vol. 792, pp. 305-310), June 2014.
- [B18] Katsigiannis, Y. A., Karapidakis, E. S., Tsikalakis, A. G., & Katsamaki, A. (2014). "Large-scale energy storage and dynamic performance of the autonomous power system in Crete Island: A review of the literature", *INTL. J. OF ENERGY*, Vol. 8, 2014, pp 60-70, ISSN 1998-4316.
- [B19] Lignos, Chrysovalantis, and Antonios G. Tsikalakis. "Impact of Thera and Crete interconnection on their economic operation" *IET Generation, Transmission & Distribution*, Vol 10, No2 (2016), pp 291-298.
- [B20] Brellas, K., Tsikalakis, A., & Kalaitzakis, K. (2016). "Reducing Solar Dish Park Production Volatility Utilizing Lithium-ion Batteries". *Periodica Polytechnica Electrical Engineering and Computer Science*, 60(4), 254-260.
- [B21] Akrasakis, Stavros, and Antonios G. Tsikalakis. "Corridor lighting retrofit based on occupancy and daylight sensors: implementation and energy savings compared to LED lighting." *Advances in Building Energy Research* (2017): 1-15.
- [B22] Fiorentzis, K., Tsikalakis, A., Karapidakis, E., Katsigiannis, Y., & Stavrakakis, G. (2020). Improving Reliability Indices of the Autonomous Power System of Crete Island Utilizing Extended Photovoltaic Installations. *Energies*, 13(1), 64.

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Invited Chapters

[BK1] A.G. Tsikalakis, Z.N. Vrontisi, "3.10 Energy Networks" in *Climate Vulnerability Understanding and Addressing Threats to Essential Resources*, Vol.3, 2013, pp 135-147 -ISBN 9780123847034, DOI: 10.1016/b978-0-12-384703-4.00319-1.

[BK2] Antonios Tsikalakis and Terpsihori Tzouliadaki, "Chapter 9. Electrification of Rural Areas using Renewable Energy Sources: Review of Best Practices Around the World" In *Renewable Energy: Economics, Emerging Technologies and Global Practices*, Edited by Andreas Poullikkas, in Nova Publishers, 2013. ISBN: 978-1-62618-264-6, pp 197-246.

[BK3] Manolis Karapidakis, Antonis Tsikalakis, "Network Stability under High Wind Power Penetration" for the *Handbook of Wind Power Systems (HWPS)*", edited by Pardalos, P., Rebennack, S., Pereira, M. V., Iliadis, N. A., & Pappu, V. (Eds.) (pp. 333-355). Springer Berlin Heidelberg 2014.

[BK4] Aris Dimeas, Antonis Tsikalakis, George Kariniotakis, George Korres. "Microgrids control issues" in "Microgrids: Architectures and Control", edited by Willey-*IEEE* (2014), pp 25-80.

[BK5]

International Conference Announcements based on full paper review

Announcements reviewed on extended abstract and full text.

[B1] A. Tsikalakis, N. Hatziargyriou, "Financial Evaluation of Renewable Energy Source Production in Microgrids Markets Using Probabilistic Analysis", *In proc of the IEEE Power Tech '05 Conf.*, St. Petersburg June 2005, paper No133 (High Quality Paper Award).

[B2] A. G. Tsikalakis, N.L.Soultanis, N. D. Hatziargyriou, "On-line storage management to avoid voltage limit violations", *In Proc of the 9th PMAPS Conf.*, Stockholm, 11-15th June 2006, Session 2:5.

[B3] N. D. Hatziargyriou, A. G. Anastasiadis, J. Vasiljevska, A. G. Tsikalakis, "Quantification of Economic, Environmental and Operational Benefits of Microgrids", *IEEE PowerTech 2009*, Bucharest, Romania, paper no 512.

Announcements reviewed on abstract and full text.

[B4] A.Tsikalakis, N.Hatziargyriou, J.Dam et al. "Energy resource planning and control tool for Multi-Users Parks" *Proc of the 3rd Med Power 2002 Conf.*, Athens, Nov. 2002, MED 02/310.

[B5] J. Stefanakis, A. Gigantidou, N. Hatziargyriou, A. Dimeas, A. Tsikalakis "Preliminary Evaluation of the MORE CARE Operation in Crete" *Proc. Of the 3rd MedPower02*, Athens, Nov 2002, MED02/006.

[B6] A.Tsikalakis, N. Hatziargyriou, K. Papadogiannis, A.Gigantidou, J. Stefanakis, E. Thalassinakis "Financial Contribution of Wind Power on the Island System of Crete", *Proc of RES for islands Conf.*, Crete, May 2003, pp 21-31.

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- [B7] N.Hatziargyriou, A.Dimeas, A.Tsikalakis, A. Gigantidou, E. Thalassinakis, "Intelligent Techniques applied to the Economic and Secure Operation of Island Systems with Large Wind Power Penetration". *CD proc. of the 12th ISAP 03*, Lemnos, September 2003, ISAP 03/162.
- [B8] Hatziargyriou N, Tsikalakis AG, Dimeas A, Georgiadis D, Gigantidou A, Stefanakis J, Thalassinakis E. "Security and economic impacts of high wind power penetration in island systems." *Proc. of Cigre Conf.*, Paris, France, Aug. 2004, C6-204.
- [B9] A.Tsikalakis, I.Tassiou, N.Hatziargyriou, "Impact Of Energy Storage In The Secure And Economic Operation Of Small Islands", *Proc. of MedPower04*, Lemessos, Nov 2004, MED04/CH33.
- [B10] I.Skotinos, N.Hatziargyriou, A.Dimeas, A.Tsikalakis, "Economic Evaluation of Energy Production Systems with high wind power penetration, application to the Greek National Interconnected system." *presented at the 2004 EWEA Conf.*, London.
- [B11] A. Tsikalakis, N. Hatziargyriou, "Economic Scheduling Functions of a Microgrid Participating In Energy Markets", *In proc of the DG Cigre symposium*, Athens, 13-16 April 2005, paper no 302.
- [B12] I.Skotinos, A.Dimeas, A. Tsikalakis, N.Hatziargyriou, "Economic and Environmental evaluation of high wind power penetration, in the Greek interconnected energy production system" *In proc of the DG Cigre symposium*, Athens, 13-16, April 2005, paper no 409.
- [B13] N.Hatziargyriou, I.Skotinos, A.Tsikalakis, "Status of Integrating Renewable Electricity Production in Greece: Prospects and Problems" *In proc of the IEEE Power Tech '05 Conf.*, St. Petersburg June 2005, paper No 702.
- [B14] N. D. Hatziargyriou, A. Dimeas, A. G. Tsikalakis, J.A. Pecos Lopes, G.Kariniotakis, J.Oyarzabal, "Management of Microgrids in Market Environment" in the *1st Intl. Conf. on Future Power Systems FPS*, Amsterdam, November 2005.
- [B15] Antonis G. Tsikalakis, Yiannis A. Katsigiannis, Pavlos S. Georgilakis, Nikos D. Hatziargyriou "Determining and Exploiting the Distribution Function of Wind Power Forecasting error for the Economic Operation of Autonomous Power Systems", *In proc of the 2006 IEEE PES General Meeting* 18-22 June 2006, Montreal, Canada, PESGM2006-00959.
- [B16] N. D. Hatziargyriou, A. Tsikalakis, A.Androutsos, "Status Of Distributed Generation In The Greek Islands", *In proc of the 2006 IEEE PES General Meeting* 18-22 June 2006, Montreal, Canada, PESGM2006-00368.
- [B17] A.G. Tsikalakis, N.D. Hatziargyriou, "Environmental Benefits Of Microgrids Operation", presented at the 19th ECOS 06, Aghia Pelagia, Crete, Greece, July 2006.
- [B18] F. Pilo, N. Hatziargyriou, G. Celli, G. Pisano, A. Tsikalakis, "Economic Scheduling Functions To Operate Microgrids In Liberalized Energy Markets", *presented at the 41st Cigre Session*, Paris August 2006 paper C6-303.

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- [B19] Nikos. D. Hatziargyriou, Zoe Vrontisi, Antonis G. Tsikalakis, Vasilis Kilias, "The effect of island interconnections on the increase of Wind Power penetration in the Greek System." *In Proc. of the 2007 IEEE PES General Meeting, 24-28 June 2007, Tampa, Florida, US, PESGM07'07-1075.*
- [B20] Antonis G. Tsikalakis, Nikos D. Hatziargyriou, "A software for the short-term operation of isolated power systems with high Renewable Energy Sources penetration", *4th European PV-Hybrid and Mini-Grid Conf. Glyfada, Greece, May 29th/30th, 2008, pp 350-357.*
- [B21] Manos Psychogiopoulos, Antonis G. Tsikalakis, Nikos D. Hatziargyriou, "Short-term scheduling of Reserve-Osmosis Desalination Loads in Hybrid Systems", *4th European PV-Hybrid and Mini-Grid Conf. Glyfada, Greece, May 29th/30th, 2008, pp 344-349.*
- [B22] A.G. Anastasiadis, A.G. Tsikalakis, N.D.Hatziargyriou, "Environmental Benefits from DG Operation when Network Losses are Taken into account", *DISTRES Conf. (Conf. on the promotion of Distributed Renewable Energy Sources in the Mediterranean region) Cyprus 11-12 December 2009, paper no 163.*
- [B23] Andreas Poulidakis, Antonios Tsikalakis, Nikos D. Hatziargyriou "Economic evaluation of low Photovoltaics (PV) penetration in island power systems, application to Cyprus", *DISTRES Conf. (Conf. on the promotion of Distributed Renewable Energy Sources in the Mediterranean region) Cyprus 11-12 December 2009, paper no 108.*
- [B24] Antonios G. Tsikalakis, Nikos D. Hatziargyriou, George Caralis, Arthouros Zervos, Emmanouel Zoulias, Emmanouel Stamatakis, George Tsamalis, Olga Parissis, Salvador Suarez Garcia, Daniel Henríquez Alamo "Impact of different applications of Storage Systems in island power systems", *DISTRES Conf. (Conf. on the promotion of Distributed Renewable Energy Sources in the Mediterranean region). Cyprus 11-12 December 2009, paper no 131*
- [B25] O. -S. Parissis, E. Zoulias, E. Stamatakis, K. Sioulas, L. Alves, R. Martins, A. Tsikalakis, G. Caralis "Integration of Wind and Hydrogen Technologies in the Power System of Corvo Island, Azores: A Cost-Benefit Analysis", *HYSYDAYS – 3rd World Congress Of Young Scientists On Hydrogen Energy Systems, 7-9 October, 2009 Turin, Italy.*
- [B26] Anestis G. Anastasiadis, Nikos D. Hatziargyriou, Antonios G. Tsikalakis, "Operational and Environmental Benefits Due to Significant Penetration of Microgrids and Topology Sensitivity", in *Proc of the 2010 IEEE Power & Energy Society General Meeting, 25 Jul - 29 Jul 2010, Minneapolis, MN, USA, paper 2010GM1438*
- [B27] Ch. Malamatenios, G. Vezirgianni, El. Giakoumelos, Antonis Tsikalakis, Th. Tomtsi, N. Hatziargyriou, "Concentrated Solar Power (CSP) Technologies And Applications In The Middle East & North Africa (MENA) Countries", *Proc. of the DEMSEE Conf., Sitia, Crete, Greece, 23-24 September 2010*
- [B28] Antonios G. Tsikalakis, Nikolaos D. Hatziargyriou, Emmanuel Karapidakis, and Emmanuel Kymakis, "Economic evaluation of low Photovoltaics (PV) penetration in island power systems, application to Crete", *proc of the DEMSEE Conf., Sitia, Crete, Greece, 23-24 September 2010*

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- [B29] Nikos D. Hatziargyriou, Antonios G. Tsikalakis, T. Tomtsi, E. Karfopoulos, G. Karagiorgis, C. Christodoulou, A. Poullikas, "Evaluation Of Virtual Power Plant (VPP) Operation Based On Actual Measurements", 7th *MedPower 2010*, MED10/136.
- [B30] Vasilios Katsioulis, Emmanuel Karapidakis, Marios Hadjinicolaou and Antonis Tsikalakis, "Wireless Monitoring and Remote Control of PV Systems Based on the ZigBee Protocol", *DoCEIS'11, 2nd Doctoral Conf. on Computing, Electrical and Industrial System*, Feb. 2011, Lisbon, Portugal, pp. 297–304, 2011
- [B31] Marios Moschakis, Spyros Loutridis, Vasilis Dafopoulos, Anestis Anastasiadis, Thomai Tomtsi, Emmanuel Karapidakis, Antonis Tsikalakis, "Prediction of Voltage Sags Applying the Method of Critical Distances to Meshed Power Networks", 12th *PMAFS Conf.*, Turkey, 14-16th June 2012
- [B32] Katsigiannis, Y. A., Tsikalakis, A. G., Karapidakis, E. S., & Katsamaki, A. (2012). Impact of Residential Buildings Retrofitting Actions on the Electricity Production of Crete Island. *In Proc. 3rd Intl. Conf. on Development, Energy, Environment, Economics (DEEE'12)*.
- [B33] Katsigiannis, Y. A., Katsamaki, A., Tsikalakis, A. G., & Karapidakis, E. S. "Education and training of building professionals on retrofitting actions on Crete Island". *In Proc. of the 24th EAEEIE Annual Conf. (EAEEIE)*, 2013 (pp. 32-37). *IEEE*.
- [B34] Katsigiannis, Y., Karapidakis, E., Tsikalakis, A., & Katsamaki, A. "A Review of the Proposed Large-Scale Energy Storage Applications on the Autonomous Power System of Crete", in *RECENT ADVANCES in ENERGY, ENVIRONMENT, ECONOMICS and TECHNOLOGICAL INNOVATION*, Paris October 2013, pp 45-54
- [B35] Tsikalakis, A. G., Karapidakis, E. S., Thalassinakis, E. D., Siderakis, K., & Katsigiannis, Y. A. (2014, March). Concerns about protection schemes in interconnected operation of the island of Crete. *In Developments in Power System Protection (DPSP 2014), 12th IET Intl. Conf. on* (pp. 1-6). IET, paper P026.
- [B36] Karapidakis, E. S., Katsigiannis, Y., Tsikalakis, A., & Maravelakis, E. (2014, November). Current status and future prospects of Crete's power system. *In Fundamentals of Electrical Engineering (ISFEE), 2014 Intl. Symposium on* (pp. 1-6). *IEEE*.
- [B37] Marianna Dimitropoulou, Antonios Tsikalakis, Antiopi Gigantidou, Emmanuel Thalassinakis, Dionysios Pylarinos, "Estimation of Hosting Electric Vehicles Capacity in the Transformers on the Island of Crete" *DEMSEE'16*.
- [B38] Antoniou, A., Theodorou, N., Tsikalakis, A., Kalaitzakis, K., & Stavrakakis, G. (2013). Impact of the Euro-Asia interconnector project on the economic operation of Crete and Cyprus power systems. *In Proc. 2nd International Conference on Power Options for East Mediterranean Regions (POEM 2013)*-Paper 13/153.

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National Conferences

- [B39] Ν.Δ. Χατζηαργυρίου, Ι. Στεφανάκης, Α.Γιγαντίδου, Ε.Θαλασσινάκης, Α.Γ.Τσικαλάκης, Α. Δημέας, “Οικονομική Αξιολόγηση Της Λειτουργίας Νησιωτικών Συστημάτων Με Μεγάλη Διείσδυση Αιολικής Ενέργειας Με Χρήση Προηγμένων Συστημάτων Έλεγχου”, Σύνοδος *E.E Cigre* Αθήνα 2003, Αθήνα 27 & 28 Νοεμβρίου 2003.
- [B40] Α.Γ. Τσικαλάκης, Η. Σκοτεινός, Ν.Δ. Χατζηαργυρίου «Οικονομική Αξιολόγηση Της Λειτουργίας Του Διασυνδεδεμένου Συστήματος Και Νησιωτικών Συστημάτων με Ανανεώσιμες Πηγες Ενέργειας Με Χρήση Προηγμένων Συστημάτων Έλεγχου», 3ο Εθνικό Συνέδριο για τις ΑΠΕ, Αθήνα, February 2005.
- [B41] Ε Σταματάκης, Α. Tsikalakis, Γ. Τζαμαλής, Ε. Ζούλιας, Ε. Βαρκαράκη, Γ. Κάραλης, Π.Κορωγιαννάκης, Ν. Χατζηαργυρίου, S. Suárez García, D. Henriquez, M. -E. Delenta: “Αύξηση Διείσδυσης ΑΠΕ σε Νησιωτικά Συστήματα Μέσω Τεχνολογιών Αποθήκευσης Ενέργειας: Μελέτη Περιπτώσεων”, 9ο Εθνικό Συνέδριο για τις Ήπιες Μορφές Ενέργειας, Γεροσκήπου, ΠΑΦΟΣ – ΚΥΠΡΟΣ 26 - 28 ΜΑΡΤΙΟΥ 2009. Σελ. 317-324.
- [B42] Ν.Χατζηαργυρίου, Α.Αναστασιάδης, Α.Τσικαλάκης «ΟΙΚΟΝΟΜΙΚΑ ΚΑΙ ΠΕΡΙΒΑΛΛΟΝΤΙΚΑ ΟΦΕΛΗ ΤΩΝ ΜΙΚΡΟΔΙΚΤΥΩΝ» (για το συνέδριο RENES 2010)
- [B43] Ε. Βρεττός, Α. Τσικαλάκης και Σ. Παπαθανασίου, Ν. Χατζηαργυρίου, Μ. Κάλλιος, «Υβριδικά Συστήματα Πολύ Υψηλής Διείσδυσης ΑΠΕ σε Μικρά Νησιωτικά Δίκτυα», για το συνέδριο RENES 2010
- [B44] Ρογκάκου Στ., Τσικαλάκης Α.- Καλαϊτζάκης Κ. «Διοχέτευση Βιοαερίου Χώρων Υγειονομικής Ταφής Απορριμμάτων (ΧΥΤΑ) στο δίκτυο φυσικού αερίου» 2ο Πανελλήνιο Φοιτητικό Συνέδριο Ελληνικής Εταιρείας Επιχειρησιακών Ερευνών, «Πράσινη Επιχειρηματικότητα και Εταιρική Κοινωνική Ευθύνη». Σελ 137-149,2014
- [B45] Ε. Θαλασσινάκης, Α. Τσικαλάκης, «Τρόπος λειτουργίας συστήματος Κρήτης και οικονομικά αποτελέσματα μετά τη "μικρή" διασύνδεση με το Ηπειρωτικό”, Σύνοδος Ελληνικής Επιτροπής Cigre

Scientific Recognition

Citations per Paper (excluding co-author citations)

Journal paper	Citations	Conference Announcement	Citations
B1	60	B23	9
B2	256	B24	7
B3	13	B25	35
B4	32	B27	2
B5	29	B28	9
B6	22	B29	2
B7	17	B30	9
B8	24	B31	3
B9	46	B32	2
B10	40	B33	14

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B11	75	B35	4
B14	1	B36	165
B15	1	B37	21
B19	3	B38	9
BK1	2	B39	1
BK4	13	B40	6
		B41	5
		B42	1
		B44	4
		B48	19
		B51	10
		B52	8
		B54	1
		B56	3
		B58	1
		B64	1
		B67	2
		E1	2
		E2	7
		E5	1
		E6	1

Teaching

Teaching at Undergraduate Level

A) School Electrical and Computer Engineering of NTUA

Teaching of exercises in the course Transient Analysis of Power Systems ” of the 8th Semester during Academic Year 2003-04.

B) TEI of Crete/Chania Branch/ Dept. of Natural Resources and Environment

During the Academic Years 2009-2013, I had taught the laboratory part of the subjects “Renewable energy Sources” ,«Analog and Digital Electronics»,« Measurement and Control Systems», “Coupling of Energy Systems” and the theory of the subject « Energy, Environment and Natural Resources»

C) Technical University of Crete/School of Electronics and Computers Engineering

- **Adjunct Lecturer, Teaching** « Introduction to Energy Technology I » of the 4th Semester for the Summer Semester of 2009-2010.
- **Adjunct Lecturer, Teaching** “Generation and Distribution of Electricity” of the 7th Semester for the Academic Years 2010-15.
- **Adjunct Lecturer, Teaching** «Introduction to Power Systems» of the 6th Semester for the Academic Years 2010-13.

D) TEI of Crete/School of Electrical Engineering

Since 2010 to 2017 as Adjunct Lecturer and since 2017 as an Assistant Professor for the classes:

- Principles of Electrical Circuits and measurements (Theory)
- Power Systems II (THEORY & LAB)

- Power Systems I (Theory)

- Energy Management of Buildings (THEORY & LAB)
- Electricity Management (THEORY & LAB)
- Electrical Machines I (THEORY & LAB)
- Electrical Machines II (LAB)
- Technical legislation and Safety at Work (Theory)

Teaching at Postgraduate Level

Postgraduate Program «Advanced Production, Automation and Robotics Systems »

Teaching of «Smart Buildings»

Postgraduate Program « Energy systems»

- ❑ **Teaching** of the laboratory part of the classes «Energy Systems Synthesis».
- ❑ Hybrid Systems and Storage Devices
- ❑ Energy Economy
- ❑ Smart Grids and RES

Postgraduate Theses supervised

Stavros Akrasakis «Smart lighting and Applications at the School of Engineering of HMU”, MSc «Advanced Production, Automation and Robotics Systems», TEI of Crete February 2016.

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Georgios Foukarakis and Michael Ieronimakis «TRAINING ON BUILDING AUTOMATION EQUIPMENT AND PROPOSAL OF LABORATORY EXERCISES», MSc Energy Systems, HMU February 2020.

Fiorentzis Konstantinos: “ Distributed Generation Impact Assessment on the Reliability Indices of the Power System of Crete”, MSc Energy Systems, HMU March 2020

Participation in the Examination Committee of Postgraduate Theses of other Universities

Konstantinos Brellas, "Modeling of Hybrid Operation of a Concentrated Solar Power Production Unit", School of Electrical and Computer Engineering, Technical University of Crete, August 2017.

Research

Research Interests

The following list describes my research interests with references to specific papers and projects I have been involved in.

1. Grid Operation and Management under high Distributed RES Generation [B23],[J2], even with combination with thermal demand [B24]. (Relevant Research projects DISPOWER, ENSURE, Eu-DEEP).
2. Autonomous Power systems, especially Island Systems, under High RES penetration [B3], [B12],[BK3],[B5]-[B9],[B16],[B19]-[B21],[B39]- [B43]. (Relevant Research Projects MORE CARE, RESPIRE, DISPOWER, VPBC-RES, STORIES, RISE, AHK, IntEmRES, SiNGULAR, "Green Island»)
3. Interconnection of Autonomous Power Systems and the corresponding impact [B19],[B19],[B35],[B38].
4. Co-ordinated operation of Distributed Generation either in Microgrids or in VPPs [B49].and more specifically :
 - a. Market Operational principles within Microgrids and control issues [BK4], [B2],[B4],[B6],[B18],[B11],[E2].
 - b. Further applications for exploiting the Microgrid Structure benefits [B1],[B6],[B2],[B14], [B46][**Error! Reference source not found.**],[B62].
 - c. Multi-Microgrids and ancillary services offered. Emphasis on losses and emission reduction [B3],[B22],[B26][B7],[B43],[E2].(Relevant Research Projects MICROGRIDS, MORE MICROGRIDS)
 - d. Virtual Power Plants Operation [B29],[E9].
5. Energy Storage management in electricity grids with emphasis to:
 - a. Contribution of energy storage to the operation and security of autonomous power systems [B29],**Error! Reference source not found.**,**Error! Reference source not found.**,**Error! Reference source not found.**,**Error! Reference source not found.** , [B44],[B61], (Relevant Research projects Dispower & STORIES)
 - b. Their Contribution on Voltage Support [B2].

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- c. Operation in energy market context and economic operation impact assessment [A1](Relevant Research Projects EU-DEEP & STORIES)
- d. Impact Assessment on Dynamic Security of Power Systems [B17]-[B18].
- e. RES management and integration via energy storage [B20].
- f. Spinning Reserve reinforcement via energy storage [B9] (Relevant Research Projects Dispower & STORIES)
6. Demand Side Management with emphasis to Demand Response and more precisely
 - a. Participation of Demand Side in Microgrids and VPP Operation via Demand side Bidding reflecting the value of the demand at specific moment [B2],[B4],[B8],[B11],[BK4] (Relevant Research Projects Microgrids & More Microgrids, Eu-DEEP)
 - b. Joint management of total demand and “controllable” demand in Energy Grids [B21],[B24], [B42] with more emphasis on applications of Desalination and Autonomous Power Systems (Research Projects STORIES).
 - c. Remuneration of Energy storage or controllable loads in energy storage [B9].
 - d. Electric Vehicles and Energy Networks [B37].
 - e. Energy hubs [B44].
7. Application of Probabilistic Techniques on Power Systems Analysis [B3][B2][B1],[B23],[B29],[B31] (Relevant Research Projects EU-DEEP,RESPIRE,MICROGRIDS,DISTRES)
8. Intelligent Systems Applications on Power Systems [B7][B18][B5] (Relevant Research Projects MORE CARE,MICROGRIDS,ANEMOS)
9. Emission impact assessment for Distributed Generation[B1],[B17], taking also into account the topology and Network losses [B22][B7],[B26] (Relevant Research Projects MORE MICROGRIDS,MICROGRIDS)
10. Climate Change Impact on Energy Networks [BK1]
11. Assessment of RES value under various levels of penetration,operating conditions and energy markets. [B1],[B5],[B10], [B12],[B39] (Relevant projects ANEMOS,MORE CARE,MICROGRIDS,DISTRES)
12. Estimation and utilization of RES and demand forecasting uncertainty on the economic operation of Power Systems[B3],[B15] (Relevant Projects DISPOWER,ANEMOS,MORE CARE)
13. Management of Remote Hybrid-RES Grids[B20] (Project RISE)
14. RES Electrification[BK2],[B11](Research Projects MESfIA)
15. Solar Thermal Power Stations [B11], [B20], [B27], [E15].
16. Regulatory framework of RES and storage with emphasis on islands. International Co-operation with Countries outside EU such as Western Balkans, Asian Countries and Asian Countries [B9], [B16],[B13],[B19],[B11],[B27],[E3-E4&E7] (Relevant Research projects DISTRES,VBPC-RES,STORIES,SiNGULAR, Translation of Non-Interconnected Islands Grid Code)
17. Energy saving via lighting systems [J15] and training of training of technicians [B33] (Research Projects REE_TROFIT,MESfIA)
18. Geographical Information System Applications for Power Systems [B19],[B15].
19. Distribution Systems Analysis under high R/X ratio [B16],[B2]
20. Use of Microcontrollers for the demand side monitoring and management [B31].

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Participation in Research Projects

As scientific Responsible

I am the Co-ordinator of the ERASMUS+ Research Project entitled “Mastering Energy Supply focusing on Isolated Areas” (MESfIA) starting on 15/11/2018 with 36 months duration (Mesfia.eu)

As a Researcher

Project Title	Funding	Organization
MORE CARE: More Advanced Control Advice for Secure Operation of Isolated Power Systems with Increased Renewable Energy Penetration and Storage": ERK5-CT1999-00019	European Commission	NTUA
ENSURE <u>E</u> nergy <u>S</u> ervices for multi- <u>U</u> ser business parks with enhanced levels of <u>R</u> enewables and Rational Use of Energy", Project NNE5 395 2001 Principal Researcher	European Commission	NTUA
RESPIRE “Renewable Energy Sources Promotion and Integration for the sustainable development of insular Regions of Europe”NNE5-2001-00740 Principal Researcher	European Commission	NTUA
DISPOWER: Distributed Generation with high penetration of renewable energy sources, Contract ENK5-CT2001-00522	European Commission	NTUA
MICROGRIDS : ENK5-CT-2002-00610	European Commission	NTUA
RISE – Renewables for Isolated Systems- Energy Supply and Waste Water Treatment, FP6-509161	European Commission	NTUA
ANEMOS – Development of a Next Generation Wind Power Forecasting System for the Large-Scale Integration of Onshore & Offshore Wind Farms, ENK5-CT-2002-00665	European Commission	NTUA
VBPC-RES: The Virtual Balkan Power Center for Advance of Renewable Energy Sources in Western Balkans:	European Commission	NTUA

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INCO-CT-2004-509205		
EU-DEEP The birth of a European Distributed Energy Partnership that will help the large-scale implementation of distributed energy resources in Europe.FP6 Project: SES6-CT-2003-503516	European Commission	NTUA
MORE MICROGRIDS: Advanced Architectures and Control Concepts for More Microgrids, SES6-019864	European Commission	NTUA
DISTRES Promotion and Consolidation of all Research, Technological Development and Demonstration Activities for Renewable Distributed Generation Technologies in the Mediterranean Region INCO-031569	European Commission	NTUA
AHK RFQ NO.80/2006 CONSULTANCY SERVICES FOR ESTABLISHING A STRATEGIC PLAN FOR RENEWABLE ENERGIES	Electricity Authority of Cyprus (EAC)	NTUA
Green Island-Agios Efstratios	Center of Renewable Energy Sources	NTUA
STORIES Addressing regulations on STORAGE technologies for increasing the penetration of Intermittent Energy Sources, EIE/07/159	European Commission	NTUA
REE_TROFIT: Training on Renewable Energy solutions and energy Efficiency in reTROFITting	European Commission	SPECIAL ACCOUNT FOR RESEARCH FUNDS/HMU
IntEMRES -Intelligent Energy Management in power Systems with high RES penetration	GRNET funded project	SPECIAL ACCOUNT FOR RESEARCH FUNDS/HMU
SiNGULAR Smart and Sustainable Insular Electricity Grids Under Large-Scale Renewable Integration no.309048	European Commission	SPECIAL ACCOUNT FOR RESEARCH FUNDS/AUTH
NET-METERING and VIRTUAL NET-METERING to the Prefecture of Crete	REGION OF CRETE	SPECIAL ACCOUNT FOR

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and their Municipalities-Impact Assessment Study		RESEARCH FUNDS/HMU
Investigation of the Energy Efficiency and Upgrade of the School Units of the Malevizi Municipality	MALEVIZI MUNICIPALITY	SPECIAL ACCOUNT FOR RESEARCH FUNDS/HMU
Assessment of the potential contribution of the existing Gensets as Tertiary reserves for the operation of the Power System of Crete	HEDNO	SPECIAL ACCOUNT FOR RESEARCH FUNDS/HMU

Administrative Positions

Director of the Energy Systems Division

Director of the Energy Systems Division of the Electrical Engineering Department of TEI Crete since 1/9/2018 till end of operation

4.4.2.2 Director of the Power Systems Division

Director of the Power Systems Division of the Electrical and Computer Engineering Department of HMU since 1/9/2019 till today

Participation in scientific organizations or Study Committees

- Electrical Engineer- Member of the Technical Chamber of Greece, Division of Eastern Crete
- Member of the Panhellenic Association of Electrical and Mechanical Engineers
- Member of The Institute of Electrical and Electronics Engineers (IEEE), No 80034543
- Participation in the Task force of the Technical Chamber of Greece, Division of Eastern Crete on “Short and long term Assessment of the widest RES participation into the power System of Crete”- Available Working Document www.teetak.gr.

Additional Working Experience

Additionally, to the research and teaching experience, described in the following paragraphs, I have worked as a trainee for the PPC during the summer 2001 in the Crete-Rhodes division of the PPC.

In the beginning of 2013 I co-operated with the Sitia Development Organization (OAS S.A) for the preparation of proposals to the Region of Crete.

During the first 4 months of 2015 I was in charge of the team that has undertaken the following task: “Translation of the Hellenic Non-Interconnected Islands Grid Code to English language” for the Hellenic Distribution Network Operator (HEDNO)

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During the Period December 2015-December 2017 I worked as an engineer for HEDNO in the Islands Network Operation Department and its Crete-Rhodes division. There I was one of the Operators in the Energy Dispatch Center of the Island of Crete, a power system with increased RES share and I have also participated in the committee for the most efficient Utilization of the new Power Station in South Rhodes.

Evaluator of proposals for the Hellenic Research and Technology Committee.

Other Achievements

1997: 1st Award in Heraklion Areas for the Mathematical Competence "Thales"

1998: Scholarship of Christina Gkanioti-Papageorgi Foundation for being the first student from Greek Islands entering School of Electrical and Computer Engineer.

2000: Scholarship of Ergazakis Foundation for studying at University coming from the PEDIADA Area of Heraklion Area.

2002: Award from the Technical Chamber of Greece for my Graduate Thesis

2005: (High Quality Paper Award) for the paper A. Tsikalakis, N. Hatzargyriou, "Financial Evaluation of Renewable Energy Source Production in Microgrids Markets Using Probabilistic Analysis", In proc of the IEEE Power Tech '05 Conf., St. Petersburg June 2005, paper No133.