
Dr. Panayiotis Moutis

Correspondence language: English
Sex: Male
Date of Birth: 9/05
Country of Citizenship: Greece & Canada

Contact Information

The primary information is denoted by (*)

Address

Home (*)
234 Melwood Ave, G2
Pittsburgh Pennsylvania 15213
United States

Telephone

Mobile (*) +1-412-5096364
Mobile +30-693-4250501

Email

Personal pimoutis@gmail.com
Personal p.moutis.eng@ieee.org
Work pmoutis@andrew.cmu.edu

Website

Personal panay1ot1s.com
Social Media gr.linkedin.com/pub/panayiotis-moutis/23/418/6b1

User Profile

Research Specialization Keywords: Control, Decision trees, Distributed Generation, Microgrid, Power systems, Renewable energy sources, Smart grid, Virtual power plant, Wavelet synopses

Research Disciplines: Electrical Engineering and Electronic Engineering

Areas of Research: Control System, Data mining, Electricity Conversion and Distribution, Modelization and Simulation, Solar and Wind Energy, Transmission and Processing of Numerical Signals

Fields of Application: Communication and Information Technologies, Energy

Affiliations

The primary affiliation is denoted by (*)

(*) 2016/2	Post Doctoral Research Associate, Electrical & Computer Engineering, Carnegie-Mellon University
2008/1	Member, Various Societies, Institute of Electrical and Electronics Engineers
2007/11	Senior Researcher, School of Electrical and Computer Engineering, National Technical University of Athens
2014/1 - 2014/7	Research Fellow in Microgrids, Engineering and Science, University of Greenwich

Degrees

- 2007/11 - 2015/1
 Doctorate, Electrical and Computer Engineering, Smart Grid, National Technical University of Athens
 Degree Status: Completed
 Transferred to PhD without completing Masters?: Yes
 Supervisors: Nikos D. Hatziaargyriou; Stavros A. Papathanassiou; Costas D. Vournas
- 2002/11 - 2007/11
 Diploma, Electrical and Computer Engineering, Electric Power Systems, National Technical University of Athens
 Degree Status: Completed
 Supervisors: Nikos D. Hatziaargyriou

Recognitions

- 2013/1 - 2013/12
 2013 IEEE Sustainability 360 Contest - Topic: Power
 Institute of Electrical and Electronics Engineers
 Prize / Award
 Research Disciplines: Electrical Engineering and Electronic Engineering

Employment

- 2013/4
 Photovoltaic Systems Technical Support Engineer
 SolarGen Ltd.
- 2012/3 - 2013/3
 Photovoltaic Systems Technical Support Engineer
 Alten SA
- 2012/7 - 2012/12
 Subcontracted Engineer for a 1MWp Photovoltaic plant
 PKLM Development Ltd
- 2008/9 - 2012/2
 Photovoltaics and Thermal Systems Technical Support Engineer
 Schueco International KG, Hellas
- 2010/12 - 2011/6
 Tutor of the course "Distributed Generation from Renewable Energy Sources & Smart Grids"
 Energy Academy of the Ios-Aegean Energy Agency
- 2007/4 - 2008/9
 Renewable Energy Systems Technical Support Engineer
 Cocoon Kanellopoulos SA

Research Funding History

Awarded [n=1]

- 2016/2
 Co-investigator
 Post Doctoral Research Associate in the framework of ABC4PV R&D project
Funding Sources: United States Department of Energy

Completed [n=26]

- 2015/1 - 2015/7
 Co-investigator
 Senior Researcher in the framework of NOBEL GRID and FASTINCHARGE R&D projects
Funding Sources: European Commission (The)

2014/6 - 2014/12 Co-investigator	Researcher in the framework of DREAM and SUSTAINABLE R&D projects Funding Sources: European Commission (The)
2014/1 - 2014/7 Co-investigator	Research Fellow in Microgrids Funding Sources: Arup ("Balancing urban microgrids in future planned communities" Research Challenge)
2014/6 - 2014/12 Co-investigator	Researcher in the framework of DREAM, FASTINCHARGE, SMARTKYE, SUSTAINABLE, DERRI, BEAMS, IRENE-40, MERGE, INTEGRAL, SmartHouse-SmartGrid, ANEMOS.PLUS and EUDEEP R&D projects Funding Sources: European Commission (The)

Publications

Journal Articles

1. Moutis P, Georgilakis P, Hatziargyriou N. (2016). Voltage Regulation Support Along a Distribution Line by a Virtual Power Plant Based on a Center of Mass Load Modeling. IEEE Transactions on Smart Grid. PP(99): 1-1, Accepted for future publication.
2. Moutis P, Skarvelis-Kazakos S, Bruccoli M. (2016). Decision tree aided planning and energy balancing of planned community microgrids. Applied Energy. 161: 197-205.
3. Moutis P, Vassilakis A, Sampani A, Hatziargyriou N. (2015). DC Switch Driven Active Power Output Control of Photovoltaic Inverters for the Provision of Frequency Regulation. IEEE Transactions on Sustainable Energy. 6(4): 1485-1493.
4. Moutis P, Hatziargyriou N. (2015). Decision Trees-Aided Active Power Reduction of a Virtual Power Plant for Power System Over-Frequency Mitigation. IEEE Transactions on Industrial Informatics. 11(1): 251-261.
5. Moutis P, Hatziargyriou N. (2014). Decision trees aided scheduling for firm power capacity provision by virtual power plants. International Journal of Electrical Power & Energy Systems. 63: 730-739.
6. Andr n F, Lehfuss F, Jonke P, Strasser T, Rikos E, Kotsampopoulos P, Moutis P, et al.(2014). DERri Common Reference Model for Distributed Energy Resources—modeling scheme, reference implementations and validation of results. e & i Elektrotechnik und Informationstechnik. 131(8): 378-385.
7. Moutis P, Papathanasiou S, Hatziargyriou N. (2012). Improved load-frequency control contribution of variable speed variable pitch wind generators. Renewable Energy. 48: 514-523.

Book Chapters

1. Hatziargyriou N, Zountouridou E, Vassilakis A, Moutis P, Papadimitriou C, Anastasiadis A. (2016). Overview of Distributed Energy Resources. Liu C, McArthur S, Lee S. Smart Grid Handbook. Wiley. First: 1-57.

Dissertations

1. Provision of Ancillary Services by Virtual Power Plants. (2015). National Technical University of Athens. Doctorate. Number of Pages: 271 Supervisor: Hatziargyriou Nikos

Newsletter Articles

1. Moutis P. (2016). Decision Tree based Optimal Coordinated Control of Distributed Generation, Storage & Demand Response. Intelligent Utility - An Energy Central Expert Community.

Conference Publications

1. Moutis P, Skarvelis-Kazakos S, Brucoli M, Hung J, Shu-Wei W. (2014). Planned communities as microgrid applications. 2014 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe) (1-7) Conference Date: 2014/10 Poster
2. Kleftakis V, Rigas A, Papadimitriou C, Katsoulakos N, Moutis P and Hatziargyriou N. (2014). Contribution to frequency control by a PMSG wind turbine in a Diesel-Wind Turbine microgrid for rural electrification. MedPower 2014 Conference Proceedings. 9th Mediterranean Conference and Exhibition on Power Generation, Transmission, Distribution and Energy Conversion (1-5) Conference Date: 2014/11
3. Moutis P, Pastromas S, Hatziargyriou N. (2013). Load-Frequency Control Supported by Variable Speed Variable Pitch Wind Generators - From Theory to Testing. EWEA 2013 Proceedings. EWEA 2013 (1-6) Conference Date: 2013/2 Poster
4. Moutis P, Hatziargyriou N. (2011). Using wavelet synopsis techniques on electric power system measurements. IEEEExplore. 2011 2nd IEEE PES International Conference and Exhibition on Innovative Smart Grid Technologies (ISGT Europe) (1-7) Conference Date: 2011/12 Poster
5. Moutis P. (2010). An introduction to wavelet synopses of electric power system measurements. IET Digital Library. 7th Mediterranean Conference and Exhibition on Power Generation, Transmission, Distribution and Energy Conversion (MedPower 2010) (197-202) Conference Date: 2010/11 Paper
6. Loukarakis E, Margaris I, Moutis P. (2009). Frequency control support and participation methods provided by wind generation. IEEEExplore. 2009 IEEE Electrical Power & Energy Conference (EPEC) (1-6) Conference Date: 2009/10 Paper
7. Moutis P, Loukarakis E, Papathanasiou S, Hatziargyriou N. (2009). Primary load-frequency control from pitch-controlled wind turbines. IEEEExplore. 2009 IEEE Bucharest PowerTech (1-7) Conference Date: 2009/6 Paper
8. Dimeas A, Hatziargyriou N, Chatzivasiliadis S, Moutis P, Tomtsi T. (2008). Multi-agent system for creation of virtual power plant (VPP) with aggregated and decentralized control. EUDEEP EC-funded project website. 3rd International Conference on Integration of Renewable and Distributed Energy Resources (IRED) Conference Date: 2008/12 Poster
9. Moutis P, Papathanasiou S, Hatziargyriou N. (2008). The Contribution of Variable Speed Variable Pitch Wind Generators in Primary Load Frequency Control. MedPower 2008 Conference Proceedings. 6th Mediterranean Conference and Exhibition on Power Generation, Transmission, Distribution and Energy Conversion (MedPower 2008) (1-6) Conference Date: 2008/11 Paper

Presentations

1. (2016). Contribution of Stochastic Renewable Energy Sources to Ancillary Services. 1st Summer School of the Postgraduate International Programme in Physics and Electrical Engineering, Bremen, Germany (Invited)
2. (2016). Optimizing the Coordinated Control of Distributed Generation, Storage and Demand Response based on Decision Trees. Invited talk at Princeton University, New Jersey, United States (Invited)
3. (2016). Optimizing the Coordinated Control of Distributed Generation, Storage and Demand Response based on Decision Trees. Talk at California Institute of Technology, Los Angeles, United States (Invited)

Courses Taught

2011/03 - 2013/07	Teaching Assistant, School of Electrical and Computer Engineering, National Technical University of Athens Course Title: Power System Analysis (Asymmetrical and Transient State) Course Level: Undergraduate (3 terms of-) Average Number of Students: ~150
2009/10 - 2011/02	Teaching Assistant, School of Electrical and Computer Engineering, National Technical University of Athens Course Title: Power System Analysis (Steady State) Course Level: Undergraduate (2 terms of-) Average Number of Students: 160
2008/05/05 - 2008/07/15	Teaching Assistant, School of Electrical and Computer Engineering, National Technical University of Athens Course Title: Energy Control Centers Course Level: Undergraduate Number of Students: 20

Student/Postdoctoral Supervision

Master's Equivalent [n=5]

2013/2 - 2014/1 Co-Supervisor	Anastasia Sampani (Completed) , National Technical University of Athens Student Degree Start Date: 2007/10 Student Degree Received Date: 2014/3 Present Position: Electrical and Computer Engineer
2013/2 - 2014/1 Co-Supervisor	Ilias Sarantakos (Completed) , National Technical University of Athens Student Degree Start Date: 2007/10 Student Degree Received Date: 2014/3 Present Position: PhD student
2010/2 - 2010/7 Co-Supervisor	Marina Katsampani (Completed) , National Technical University of Athens Student Degree Start Date: 2005/10 Student Degree Received Date: 2010/10 Present Position: PhD student
2009/2 - 2010/3 Co-Supervisor	Eleni Pavlidou (Completed) , National Technical University of Athens Student Degree Start Date: 2004/10 Student Degree Received Date: 2010/7 Present Position: Electrical and Computer Engineer
2009/2 - 2010/3 Co-Supervisor	Athanassios Xanthopoulos (Completed) , National Technical University of Athens Student Degree Start Date: 2004/10 Student Degree Received Date: 2010/7 Present Position: Electrical and Computer Engineer

Event Administration

Organizing Committee Member, IEEE Smart Grid presents its first ever 2016 IEEE International Forum on Smart Grids for Smart Cities (SG4SC), Conference, 2016/10 - 2016/10 - Arrangement of panel and plenary talk sessions.

Editorial Activities

- 2016/9 - 2018/9 Associate Editor, IEEE IES Industrial Electronics Technology News (ITeN), Journal
Responsibility of the AE is to read through the IES sponsored conferences (IECON, ISIE, etc.) and Transactions papers (TIE and TII) and propose 2 papers each month for prospective publication in the ITeN.
- 2014/9 - 2015/6 Editor, IEEE Smart Grid Newsletter Compendium, Book
Review of the IEEE Smartgrid Newsletter articles between 2013-2015 and selection of the best candidates for the 32 best-of-the-best representatives of the corresponding Smartgrid domains and subdomains as defined by the related initiative.
- 2010/1 - 2010/10 Web Chair, Energy-Efficient Computing and Networking: First International Conference, E-Energy 2010, First International ICST Conference, E-Energy 2010 Athens, Greece, October 14-15, 2010 Revised Selected Papers, Book
Supporting the approach and reach-out of the Conference as an incentive and the Scientific work presented during the Conference to the online research community.

Mentoring Activities

- 2012/3 Mentor, IEEE NTUA Student Branch
Number of Mentorees: 50
1) Supporting Student activities in competitions, educational event and initiatives. 2) Representing the IEEE NTUA Student Branch in National and International Congresses and Meetings.

Journal Review Activities

- 2016/10 - 2016/10 Reviewer, Springer Journal of Modern Power Systems and Clean Energy
Number of Works Reviewed / Refereed: 1
- 2016/9 - 2016/10 Reviewer, IET Generation, Transmission & Distribution
Number of Works Reviewed / Refereed: 1
- 2015/2 - 2016/10 Reviewer, IEEE Transactions on Industrial Informatics
Number of Works Reviewed / Refereed: 2
- 2013/7 - 2016/10 Reviewer, IET Renewable Power Generation
Number of Works Reviewed / Refereed: 10
- 2011/11 - 2016/10 Reviewer, IEEE Transactions on Power Systems
Number of Works Reviewed / Refereed: 12
- 2012/4 - 2016/9 Reviewer, IEEE Transactions on Smart Grid
Number of Works Reviewed / Refereed: 7
- 2016/4 - 2016/8 Reviewer, Elsevier Renewable Energy
Number of Works Reviewed / Refereed: 2
- 2012/11 - 2015/9 Reviewer, IEEE Transactions on Energy Conversion
Number of Works Reviewed / Refereed: 4
- 2015/4 - 2015/7 Reviewer, Ain Shams Engineering Journal
Number of Works Reviewed / Refereed: 1
- 2012/2 - 2015/6 Reviewer, IEEE Transactions on Sustainable Energy
Number of Works Reviewed / Refereed: 3

Conference Review Activities

- 2015/11 - 2015/12 Reviewer, 2016 IEEE Power & Energy Society General Meeting (PES GM), Blind, IEEE Power & Energy Society - Number of Works Reviewed / Refereed: 15
- 2015/11 - 2015/12 Reviewer, 19th Power Systems Computation Conference (PSCC), Blind, IEEE Power & Energy Society - Number of Works Reviewed / Refereed: 5
- 2014/7 - 2014/10 Reviewer, 2014 9th Mediterranean Conference on Power Generation, Transmission Distribution and Energy Conversion, Blind, National Technical University of Athens, Greece - Number of Works Reviewed / Refereed: 5
- 2011/11 - 2012/3 Reviewer, 2012 International Conference on Environment and Electrical Engineering, Blind - Number of Works Reviewed / Refereed: 3
- 2010/9 - 2011/3 Reviewer, 2011 International Conference on Environment and Electrical Engineering, Blind
Number of Works Reviewed / Refereed: 4

Committee Memberships

- 2016/8 Group Chair, P2030.1 Standard Working Group, IEEE Standards Workgroup on DC Microgrids for Rural and Remote Electricity Access Applications. "Market Development" task group chair collecting data from related to the standard market analysis.
- 2016/3 Committee Member, Smart Grid R&D Committee, IEEE
Publication of white papers on Smart Grid R&D aspirations and sustaining an up-to-date relational database on relevant R&D matters.
- 2015/11 Group Chair, P2660.1 Standard Working Group, IEEE
Recommendation Practices on Industrial Agents: Integration of Software Agents and Low Level Automation Functions. Energy & Power Systems sub-group chair, collecting existing standards and practices from the related fields of application.
- 2015/5 Committee Member, Industrial Electronics Society Technical Committee on Smart Grid/ Journals Subcommittee, IEEE
Contact, coordinate and support world-renowned scholars and experts to take up on Special Issues concerning the Smart Grid in publications relevant to the IEEE IES.
- 2015/1 Committee Member, Smart Grid Publications Committee, IEEE
1) Inviting potential authors for the IEEE Smartgrid Newsletter 2) Attracting smart gr experts to host online webinars for IEEE PES members 3) Supporting the branding of the IEEE PES Smartgrid initiative