

Dimitrios T. Bargiotas

Curriculum Vitae

1. ATOMIKA ΣΤΟΙΧΕΙΑ

Last name : Bargiotas
Name : Dimitrios
Father' name : Theodoros
Date of Birth : January 1958
Place of birth : Larissa, Greece
Marital status : Married, one child
Citizenship : Greek
Profession : Associate Professor, Department of Electrical and Computer Engineering,
School of Engineering, University of Thessaly, Greece
Phone : +302421074930
Email : bargiotas@uth.gr

2. EDUCATION

- Ph.D.** University of Tennessee, Knoxville, Tennessee, USA
Department of Electrical and Computer Engineering, December 1991
Dissertation: *Effectiveness of Dynamic Equivalent Models in Predicting Power System Stability*
- M.Sc.** University of Tennessee, Knoxville, Tennessee, USA
Department of Electrical and Computer Engineering, June 1986
Thesis: *Overstiffening of Low Frequency Synchronizing Models in Reduced Order Power System Models*
- B.Sc.** University of Patras, Greece
School of Engineering, Department of Electrical Engineering, December 1981

3. PRINCIPAL SCIENTIFIC INTERESTS

Electric Power Systems Automatic Control Systems
Transient and Dynamic Stability Analysis
Automation of Electric Distribution Systems
Advanced Concepts for Power Systems
Load Management Strategies and Technologies
Renewable Energy Sources
Sensor Technologies
Communication networks
Automatic Control Systems
Industrial Applications of Modern Control Systems

4. PROFESSIONAL MEMBERSHIP – AFFILIATIONS

Technical Chamber of Greece
Greek Society of Mechanical and Electrical Engineers
Institute of Electrical and Electronics Engineers (IEEE)
Society of Industrial Engineers
Tau Beta Pi (Engineering Honor Society)

5. PROFESSIONAL EXPERIENCE

Oct. 2017-today: *Associate Professor*, Department of Electrical and Computer Engineering, School of Engineering, University of Thessaly, Greece. Responsibilities include teaching courses in Power Systems, Control Systems, Circuits (Graduate and undergraduate).

Aug. 2007-Oct. 2017: *Professor*, Department of Electrical Engineering, Technological Educational Institute of Sterea Ellada, Greece. Responsibilities include teaching courses in Power System Analysis, Industrial Automation and in Automatic Control Systems as well as organizing their laboratories.

Jan. 2003-Aug. 2007: *Associate Professor*, Department of Electrical Engineering, Technological Educational Institute of Chalkida, Greece. Responsibilities include teaching courses in Power System Analysis, Industrial Automation and in Automatic Control Systems as well as organizing their laboratories.

Sep. 1999-Jan. 2003: *Assistant Professor*, Department of Electrical Engineering, Technological Educational Institute of Chalkida, Greece. Responsibilities include teaching courses in Power System Analysis, Industrial Automation and in Automatic Control Systems as well as organizing their laboratories.

Apr. 1998 May 1999: *Director*, Regional Energy Center of Sterea Ellada, Greece. Responsibilities include the investigation of exploiting the use of Renewable Energy Sources in the area of Sterea Ellada as well as the promotion of rational use of energy.

Jan. 1994-Sep. 1999: *Free consultant engineer, Principal investigator* in Public Power Corporation, Greece. Responsibilities include studies on the Transient and Dynamic Stability of the National Electric Power System, Interconnections and P-f and Q-V control and Also, free consultant engineer.

Jan. 1994-Sep. 1999: *Freelance consultant engineer*.

Jan. 1992-Dec. 1993: *Adjunct Assistant Professor*, Department of Electrical and Computer Engineering, University of Tennessee, Knoxville, Tennessee, USA Responsibilities include teaching courses in Electric Circuits, Electronics, Electric Power Systems, Computer Hardware and Automatic Control Systems.

Sep. 1988-Dec. 1991: *Graduate Teaching Associate*, Department of Electrical and Computer Engineering, University of Tennessee, Knoxville, Tennessee, USA. Responsibilities include teaching courses in Electric Circuits, Electric Power Systems, Electric Machines, Automatic Control Systems and Transient Stability Analysis. Research works in the area of power electronics, power systems stability and computer methods in analyzing multi-variable systems.

Oct. 1982-Dec. 1988: *Graduate Teaching Assistant and Graduate Teaching Associate*, Department of Electrical and Computer Engineering, University of Tennessee, Knoxville, Tennessee, USA. Responsibilities include the design and teaching of laboratory courses in Electric Circuits, Electronics, Electric Power Systems, and Electric Machines, with emphasis in the use of computers. Research work in the area of Power System Stability and Distribution Automation.

6. ADMINISTRATIVE ACADEMIC EXPERIENCE

Sep. 2010-Aug. 2014: *Vice Rector*, Technological Educational Institute of Sterea Ellada, Greece.

Sep. 2010-Aug. 2014: *Dean*, School of Technological Applications, Technological Educational Institute of Sterea Ellada, Greece.

Sep. 2000-Aug. 2003: *Head*, Department of Electrical Engineering, Technological Educational Institute of Chalkida, Greece.

7. PARTICIPATION IN RESEARCH PROJECTS

2-5-2014 to 29-2-2016: "SMARTEGE" (PAVET 2013).

1-7-2012 to 30-6-2015: "Routing and management of trust in large sensor networks", ARCHIMEDES III-TEI Chalkidas, ESPA 2007-2013.

- 1-12-2010 έως 28-2-2012:** "Virtualized Distributed Platforms of Smart Objects - VITRO)" FP7 ICT.
- 1-3-2008 έως 30-12-2009:** "Ad-hoc PAN and Wireless Sensor Network (AWISSENET)" FP7 ICT.
- 1-4-2006 έως 30-9-2006:** "Technological Tele-educational institution T2EI", ARCHIMEDES II–TEI Chalkidas, EPEAK.
- 2-5-2005 έως 31-12-2006:** "*Intelligent Routing in wireless networks of small nodes*", ARCHIMEDES II–TEI Chalkidas, EPEAK.
- 2-5-2005 έως 31-12-2006:** "*Develop flexible and reliable automated warehouse system*" ARCHIMEDES II–TEI Chalkidas, EPEAK.
- 2-5-2005 έως 31-12-2006:** "*Magnetostrictive Sensor Torque*", ARCHIMEDES II–TEI Chalkidas, EPEAK.
- 6-9-2002 έως 31-12-2003:** "*Development and Support of Advanced Telematic Services at TEI of Chalkida*", ARCHIMEDES II–TEI Chalkidas, EPEAK.
- 1-2-1990 έως 31-12-1990:** "*Techniques for Enhancing Power System Compatibility of Power Electronics Systems*", University of Tennessee, Power Electronics Application Center (PEAC), and Electric Power Research Institute (EPRI) USA.
- 1-1-1987 έως 31-8-1988:** "*The Athens Automation and Control Experiment*", University of Tennessee and Department of Energy (DOE), USA.
- 1-10-1982 έως 31-12-1985:** "*Reduced Order Power System Models; Constituent Matrix Analysis of Generator Coherency*", University of Tennessee and Department of Energy (DOE), USA.

8. SCIENTIFIC PUBLICATIONS

8.1 Thesis and Dissertation

- [D1] **D. T. Bargiotas**, *Effectiveness of Dynamic Equivalent Models in Predicting Power System Stability*, Ph.D. Dissertation, Department of Electrical and Computer Engineering, University of Tennessee, December 1991.
- [D2] **D. T. Bargiotas**, *Overstiffening of Low Frequency Synchronizing Models in Reduced Order Power System Models*, M.Sc. Thesis, Department of Electrical and Computer Engineering, University of Tennessee, June 1986.

8.2 Publications in Periodicals and Journals

- [J1] Alamaniotis, M., **Bargiotas, D.**, & Tsoukalas, L.H., "Towards Smart Energy Systems: Application of Kernel Machine Regression for Medium Term Electricity Load Forecasting," SpringerPlus – Engineering Section, Springer, 2016.
- [J2] Aphrodite Ktena, Christos Manasis, **Dimitrios Bargiotas**, Vasilis Katsifas, Takvor Soukissian, Harilaos Kontoyiannis, "Estimation of the Energy Potential of the Euripus' Gulf Tidal Stream Using Channel Sea-surface Slope", International Journal of Monitoring and Surveillance Technologies Research, October-December 2015.
- [J3] Alamaniotis, M., **Bargiotas, D.**, Bourbakis, N., & Tsoukalas, L.H., "Genetic Optimal Regression of Relevance Vector Machines for Electricity Price Forecasting in Smart Grids," IEEE Transactions on Smart Grid, Institute of Electrical and Electronic Engineers, vol. 6(6), November 2015, pp. 2997-3005.
- [J4] Helen C. Leligou, Christos Masouros, Eleftherios Tsampasis, Theodore Zahariadis, **Dimitrios Bargiotas**, Konstantinos Papadopoulos, Stamatis Voliotis, "Reprogramming wireless sensor nodes", IJCTT-International Journal of Computer Trends and Technology, Vol.1 Issue 2, April 2011, pp.1-9.
- [J5] C. Manassis, **D. Bargiotas**, V. Karagiannis, "Temperature distribution sensor based on magnetostrictive delay lines", *Journal of Optoelectronics and Advanced Materials*, Vol. 6, No. 2, June 2004, pp.677-680.
- [J6] V. Karagiannis, C. Manassis, **D. Bargiotas**, "Displacement sensors using magnetostrictive delay lines", *Journal of Optoelectronics and Advanced Materials*, Vol. 6, No. 2, June 2004, pp. 681- 684.

- [J7] **D. Bargiotas**, V. Karagiannis, C. Manassis, "Pressure sensing using magnetostrictive delay lines", *Journal of Optoelectronics and Advanced Materials*, Vol. 6, No. 2, June 2004, pp. 685 – 688.
- [J8] **Dimitrios Bargiotas**, Vassilios Karagiannis and Christos Manassis, "Magneto-Elastic Uniformity of Glass Covered Wires Used in Magnetostrictive Delay Lines", *Sensors and Actuators: A* 106 (1-3), pp 80-83, 15 September, 2003.
- [J9] Vassilios Karagiannis, Christos Manassis and **Dimitrios Bargiotas**, "Position Sensors Based on the Delay Line Principle", *Sensors and Actuators: A* 106 (1-3), pp 183-186, 15 September, 2003.
- [J10] Christos Manassis, **Dimitrios Bargiotas** and Vassilios Karagiannis, "Optimized Distributed Field Sensor Based on Magnetostrictive Delay Lines", *Sensors and Actuators: A* 106 (1-3), pp 30-33, 15 September, 2003.
- [J11] R. Gao, S. Basseas, **D. T. Bargiotas**, L. H. Tsoukalas, "Next Generation Hearing Prosthetics", *IEEE Transactions Robotics and Automation Magazine*, pp 21-25 March, 2003.
- [J12] T. E. Fieno, **D. T. Bargiotas** and L. H. Tsoukalas, "Optimized Anticipatory Control Applied to Electric Power Systems", *International Journal of Computing Anticipatory Systems*, published by ASBL CHAOS, ISSN 1373-5411, Belgium, 2002.
- [J13] **D. T. Bargiotas** and J. D. Birdwell, "Residential Air Conditioner Dynamic Model for Direct Load Control," *IEEE Transactions on Power Delivery*, Vol. 3, pp. 2119-2126, October 1988.

8.3 Publications in Conference Proceedings

- [C1] Nikoleta Pontikakou, Panagiotis Trakadas, Theodore Zahariadis, Panagiotis Gonis, Stamatis Voliotis, and **Dimitrios Bargiotas**, "Integration of Wireless Sensor Networks with Building Energy Management Systems", ENERGY 2019, The Ninth International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, 978-1-61208-713-9, June 2 - 6, 2019, Athens, Greece
- [C2] Eleftherios Tsampasis, **Dimitrios Bargiotas**, Charalambos Elias, Lambros Sarakis, "Communication challenges in Smart Grid", MATEC Web of Conferences, EDP Sciences, 2016.
- [C3] Theodore Zahariadis, Lambros Sarakis, Stamatis Voliotis, **Dimitrios Bargiotas**, Panagiotis Karkazis, "Evaluation of RPL-compliant routing solutions in real-life WSNs", MATEC Web of Conferences, EDP Sciences, 2016.
- [C4] Antonia Nasiakou, Manolis Vavalis and **Dimitrios Bargiotas**, "Simulating Active and Reactive Energy Markets", 6th International Conference on Information, Intelligence, Systems and Applications (IISA), Corfu, Greece, July 6-8, 2015.
- [C5] Aphrodite Ktena, Christos Manassis, **Dimitrios Bargiotas**, Vasilis Katsifas, Takvor Soukissian and Harilaos Kontoyiannis, "Energy Potential of Euripus' Gulf Tidal Stream", 6th International Conference on Information, Intelligence, Systems and Applications (IISA), Corfu, Greece, July 6-8, 2015.
- [C6] Lambros Sarakis, Stamatis Voliotis, **Dimitrios Bargiotas**, Theodore Zahariadis, "Assessment of common routing metrics for efficient RPL-based routing in large WSNs", 6th International Conference on Applied Informatics and Computing Theory (AICT '15), Salerno, Italy, 27-29 June, 2015.
- [C7] Panagiotis Karkazis, Ioannis Papaefstathiou, Lambros Sarakis, Theodore Zahariadis, Terpsichori-Helen Velivassaki and **Dimitrios Bargiotas**, "Evaluation of RPL with a Transmission Count-Efficient and Trust-Aware Routing Metric", 2014 IEEE International Conference on Communications (ICC'14), Sydney, Australia, pp.550-556, 10-14 June, 2014.
- [C8] Miltiadis Alamaniotis, Andreas Ikonomopoulos, Aggelos Alamaniotis, **Dimitrios Bargiotas**, Lefteri H. Tsoukalas, "Day-ahead Electricity Price Forecasting using Optimized Multiple-Regression of Relevance Vector Machines", 8th Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2012), Cagliari, Italy, October 1-3, 2012.

- [C9] Stamatis Voliotis, Theodore Zahariadis, Helen C. Leligou, **Dimitrios Bargiotas**, Panagiotis Trakadas, Panagiotis Karkazis, "A Scalable Geographical Routing approach for Wireless Sensor Networks", 17th International Workshop on Systems, Signals & Image Processing (IWSSIP 2010), Rio de Janeiro, Brazil, 17-19 June, 2010.
- [C10] **Dimitrios Bargiotas**, Aphrodite Ktena, Christos Manasis and Onoufriou Ladoukakis, "A scalable low-cost automated storage & retrieval system," 16th International Workshop on Systems, Signals & Image Processing (IWSSIP'05), Chalkida, Greece, 18-20 June, 2009.
- [C11] A. Ktena, C. Manasis, C. Papadopoulos, **D. Bargiotas**, O. Ladoukakis, K. Ziatakis, I. Valsamis, F. Magkafas, John Petrou and Chris Petridis, "Measurement system for a magnetostrictive torque sensor," 16th International Workshop on Systems, Signals & Image Processing (IWSSIP'05), Chalkida, Greece, 18-20 June, 2009.
- [C12] Konstadinos Nikolau and **Dimitrios Bargiotas**, "Optimal Power Management for PV Systems", 3rd International Conference on Renewable Energy Sources and Energy Efficiency, Athens, Greece, 20-23 November, 2008.
- [C13] K. Papadopoulos, S. Voliotis, H.C. Leligou, **D. Bargiotas**, P. Trakadas, Th. Zahariadis, "A Lightweight Trust Model for Wireless Sensor Networks," International Conference on Numerical Analysis and Applied Mathematics (ICNAAM 2008), Kos, Greece, 16-20 September, 2008, pp.420-423.
- [C14] Th. Zahariadis, S. Voliotis, **D. Bargiotas** and Ch. Manasis, , "QoS-aware Handoff schemes for all-IP Mobile/Ad-hoc Networks," International Conference on Systems, Signals and Image Processing (IWSSIP'06), Budapest, Hungary, September 21-23, 2006.
- This paper analyses Mobile IPv6 and three enhancements (Fast MIPv6, Hierarchical MIPv6 and Hierarchical Fast MIPv6). Special focus is put on the degradation of QoS a mobile user perceives during a handoff. More specifically, we focus in performance metrics like handoff latency and packet loss rate.
- [C15] Petrakou, S. Voliotis, **D. Bargiotas**, Th. Zahariadis, "Streaming in Visual Sensor Networks," 13th International Conference on Telecommunications (ICT 2006), Funchal, Madeira island, Portugal, 9-12 May, 2006.
- [C16] Th. Zahariadis, S. Voliotis, Ch. Manasis, **D. Bargiotas**, "Resource & Service Discovery in Ad-hoc Visual Sensor Networks," 1st Workshop on multiMedia Applications over Wireless Networks in conjunction with The 12th European Wireless Conference, (MediaWin 2006), Athens, Greece, 2 April, 2006, pp.72-77.
- [C17] Th. Zahariadis, S. Voliotis, Ch. Manasis, **D. Bargiotas**, "An efficient QoS scheme for all-IP Mobile Ad-hoc Networks," 12th International Workshop on Systems, Signals & Image Processing (IWSSIP'05), Chalkida, Greece, 22-24 September, 2005, pp.249-253.
- [C18] **D. Bargiotas**, S. Voliotis, V. Karagiannis, C. Manassis, "Load Sensors Based On The Magnetostrictive Delay Line Technique", Proceedings of the XIII International Symposium on Measurements for Research and Industry Applications, September 29 – October 1, 2004, Athens – Greece, p. 602.
- [C19] V. Karagiannis, **D. Bargiotas**, S. Voliotis, C. Manassis, "On LVDT Response Using Glass Covered Wires", Proceedings of the XIII International Symposium on Measurements for Research and Industry Applications, September 29 – October 1, 2004, Athens – Greece, p. 606.
- [C20] C. Manassis, V. Karagiannis, **D. Bargiotas**, S. Voliotis, T. Maris, "Fluid Velocity Profile Meters Using FeSiB Glass Covered Wires", Proceedings of the XIII International Symposium on Measurements for Research and Industry Applications, September 29 – October 1, 2004, Athens – Greece, p. 610.
- [C21] Th. Zahariadis, N. Zervos, N. Nikolaou, **D. Bargiotas**, S. Voliotis, "Service Management System for Interactive TV Distribution," IWSSIP04, Poznan, Poland, 13-15 September, 2004.
- [C22] Theodore Zahariadis, Stamatis Voliotis and **D. Bargiotas**, "Realization of Mobile Internet Streaming Multimedia Applications", The 8th World Multi-Conference on Systemics, Cybernetics and Informatics, Mat., Vol. VIII, July 2004, pp. 23-28.

- [C23] Lefteri H. Tsoukalas and **Dimitrios T. Bargiotas**, "Modeling Instructible Robots for Waste Disposal Applications," IEEE International Joint Symposia on Intelligence and Systems, Rockville, Maryland, pp. 202-207, November 1996.
- [C24] Lefteri H. Tsoukalas and **Dimitrios T. Bargiotas**, "Fuzzy Implication Operators in Prediction Problems," Proceedings of the 9th Power Plant Dynamics, Control & Testing Symposium, Knoxville, Tennessee, pp. 66.01-66.13, May 1995.
- [C25] L. Tsoukalas, **D. T. Bargiotas** and R. C. Berkan, "Knowledge-Based Modeling of Power Plant Systems in the Anticipatory Paradigm," Proceedings of the International Conference on the Analysis of the Thermal and Energy Systems, Athens, Greece, pp. 845-854, June 1991.
- [C26] **D. T. Bargiotas** and J. S. Lawler, "Effects of Aggregation Methods on Individual Modes in Reduced Order Power System Models," Proceedings of IEEE Southeastcon, Knoxville, Tennessee, Vol. 1, pp. 579-586, April 1988.
- [C27] **D. T. Bargiotas**, J. S. Lawler and B. Copeland, "Overstiffening of Swing Modes in Reduced Order Power System Models," Proceedings of IEEE Southeastern Symposium on System Theory, Knoxville, Tennessee, pp. 326-330, April 1986.
- [C28] B. Copeland, J. S. Lawler and **D. T. Bargiotas**, "Constituent Matrix Analysis of Synchronous Generator Coherency," Proceedings of IEEE Southeastern Symposium on System Theory, Knoxville, Tennessee, pp. 321-325, April 1986.

8.4 Books/Technical reports

- [B1] Panagiotis Kemides, **Dimitrios Bargiotas** and Christos Sandalides, "Industrial Electrical Installation-Substations", Volume A: Industrial Installations, Ed. Pedagogical Institute of Greece, Athens, Greece, 2001.
- [B2] Christos Sandalides, **Dimitrios Bargiotas** and Panagiotis Kemides, "Industrial Electrical Installation-Substations", Volume II: Substations, Ed. Pedagogical Institute of Greece, Athens, Greece, Αθήνα, 2001.
- [B3] Maria Ioannidou, Theodore Maris and **Dimitrios Bargiotas**, Surveillance and Automation Systems of Cars, Ed. Pedagogical Institute of Greece, Athens, Greece, 2000.
- [B4] **D. Bargiotas**, D. Psychogios, Trans-European Energy Networks (TEN), New Electricity Interconnection Greece-Bulgaria. Feasibility and Evaluation Study of a New 400 kV Interconnection Line Filippi-Plovdiv or Filippi-Maritsa East 3, Public Power Corporation (PPC), Final Report, October, 1999.
- [B5] **D. Bargiotas**, D. Psychogios, Trans-European Energy Networks (TEN), Upgrading at 400 kV of the Existing 150 kV Electricity Interconnection Greece-ex Yugoslavia, Feasibility and Evaluation Study of Upgrading at 400 kV the old-Interconnection Line Amydeo-Bitola, Final Report, October, 1999.
- [B6] **D. Bargiotas**, D. Psychogios, Trans-European Energy Networks (TEN), New Electricity Interconnection Greece-Bulgaria. Feasibility and Evaluation Study of a New 400 kV Interconnection Line Filippi-Plovdiv or Filippi-Maritsa East 3, Short Circuit Analysis and Fault Level Calculations, Public Power Corporation (PPC), November, 1998.
- [B7] **D. T. Bargiotas**, Transient Stability Analysis of the Power System of Crete with inclusion of new thermal units in Atherinolakos, Public Power Corporation (PPC), December, 1997.
- [B8] **D. T. Bargiotas** and C. Manasis, Transient Stability Analysis of the Power System of Rhodes (Investigation of the New Machine Parameters), Public Power Corporation (PPC), Greece, May 1996.
- [B9] **D. T. Bargiotas**, Frequency Oscillation Studies of the Power System of Rhodes (Part II), Public Power Corporation (PPC), Greece, March 1996.
- [B10] **D. T. Bargiotas** and C. Manasis, Transient Stability Analysis of the Power System of Rhodes (Part I), Public Power Corporation (PPC), Greece, October 1995.

- [B11] **D. T. Bargiotas**, Transient Stability and Primary Frequency Adjustment Analysis of the National Power System for the Years 1995 and 1998, Public Power Corporation (PPC), Greece, January 1995.
- [B12] J. D. Birdwell and **D. T. Bargiotas**, "Model for Direct Load Control," Chapter 7 in Automating Electric Utility Distribution Systems: The Athens Automation and Control Experiment, P. A. Gnadt, J. S. Lawler, editors. Prentice Hall, 1990.
- [B13] **D. T. Bargiotas** and J. S. Lawler, Techniques for Enhancing Power System Compatibility of Power Electronics Systems, technical report prepared for Electric Power Research Institute and Power Electronics Application Center, by the Department of Electrical and Computer Engineering, University of Tennessee, December 1990.
- [B14] J. D. Birdwell, **D. T. Bargiotas**, J. Zrida and F. Chow, Data Processing and Load Modeling for the Load Control Subsystem, technical report prepared for Power Systems Technology Program, Energy Division, Oak Ridge National Laboratory, by the Department of Electrical and Computer Engineering, University of Tennessee, April 1988.
- [B15] J. Zrida, **D. T. Bargiotas** and J. D. Birdwell, Load Survey, Weather, and Arms Data Processing for the Load Control Subsystem, technical report under subcontract 41b-07685C, prepared for Power Systems Technology Program, Energy Division, Oak Ridge National Laboratory, by the Department of Electrical and Computer Engineering, University of Tennessee, October 1986.
- [B16] **D. T. Bargiotas** and J. D. Birdwell, Structure of the AASCE Load Control Subsystem, technical report prepared for Power Systems Technology Program, Energy Division, Oak Ridge National Laboratory, by the Department of Electrical and Computer Engineering, University of Tennessee, August 1985.