

Dr. Oğuzhan Ceylan

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Personal Information

Date of Birth: 18/10/1977
Place of Birth: Ankara / TURKEY
Nationality: Turkish
Marital Status: Married

Research Interests

electrical power systems simulation, electric power distribution system, smart grids, impacts of distributed energy resources (pv panels, electrical vehicles, battery storage, etc) intelligent (heuristic) methods, numerical optimization, numerical methods, parallel computing, data mining techniques, image processing

Education

- *Ph.D:* Istanbul Technical University, Informatics Institute, Computational Science and Engineering Program (PhD 2003-2012).
- *MSc:* Istanbul Technical University, Informatics Institute, Computational Science and Engineering Program, M.Sc., 2003.
- *Bachelor's Degree:* Istanbul Technical University, Electrics-Electronics Faculty, Electrical Engineering Programme, 2000.

Academic Experience

- *Assistant Prof.*
September 2017-
Kadir Has University.
- *Assistant Prof.*
September 2015-2017
Istanbul Kemerburgaz University.
- *Research Associate*
September 2014-September 2015
University of Tennessee, Knoxville, USA
Researcher at Oak Ridge National Lab, Microgrid project. Research with Prof. Dr. Kevin Tomsovic.
- *Postdoctoral Researcher*
Tubitak Postdoctoral Scholarship September 2013-September 2014
University of Tennessee, Knoxville, USA
Research with Prof. Dr. Kevin Tomsovic.
- *Graduate Student*
Istanbul Technical University, Istanbul, Turkey
Includes Ph.D. research, Ph.D., and Masters level coursework and research projects.
- IEEE CIS 19th Jyvaszkyla Summer School Scholarship

- Leonardo Da Vinci Scholarship, Digsilent GMBH, Gomaringen, Germany, 31/08/2005-01/03/2006.
- Visiting Researcher, Digsilent GMBH, Gomaringen, Germany, 15/03/2006-31/07/2006.

Recent Projects/Scholarship

- Newton Katip Çelebi Fund Researcher Links Workshop Grant with Dr. Ioana Pisica (Brunel University) , “Intelligent Infrastructures for Sustainable and Resilient Future Energy Systems” held in İstanbul Kemerburgaz University, May 24-27, 2017
- Newton Katip Çelebi Fund Researcher Links Travel Grant (Brunel University) July-August 2017.
- Researcher in “Complete Systems-Level Efficient and Interoperable Solution for Microgrid Solutions (CEISMIC)” at Oak Ridge National Laboratory from September 2014 to September 2015.

Teaching Experience

- Assistant Prof. 2017, Kadir Has University, Lectures being given:
 - Cloud Computing
 - Database Design and Management
- Assistant Prof. 2015-2017, Altınbaş University (İstanbul Kemerburgaz University), Lectures given (2016-2017 spring):
 - Power Distribution Systems
 - Electromechanical Energy Conversion
 - Power Systems Operation and Control (For Graduate Students)
- Lectures given (2016-2017 autumn):
 - Power Transmission Systems
 - Microprocessors
 - Intelligent Optimization Methods (For Graduate Students)
- Lectures given (2015-2016 spring):
 - Power Transmission Systems
 - Electromechanical Energy Conversion
 - Power Electronics
- Lectures given (2015-2016 autumn):
 - Power Distribution Systems
 - Electronics I
- Teaching Assistant August, 2001 - 2012
- Some of the lectures assisted are as follows,
 - Introduction to Scientific Computing Tools
 - Introduction to Computers
 - Scientific Computing
 - C Programming
 - Numerical Methods (Using Matlab)
 - Parallel Numerical Algorithms and Tools
 - Web Programming (Php and Mysql)
 - Power Transmission Systems

Computer Skills	<p>Unix/Linux, OpenDSS, Labview Matlab, C, Unix shell scripting, PHP, MPI, OpenMP. Gnuplot, PovRay, MySQL, Octave, TeX, LaTeX.</p>
Employment	<ul style="list-style-type: none"> • <i>Research Assistant</i> Istanbul Technical University, Institute of Informatics, February 2001-2012 • <i>Senior Data Analyst</i> Kantar Media December 2012– June 2013 • <i>Postdoctoral Researcher</i> University of Tennessee, September 2013– September 2014 • <i>Research Associate</i> University of Tennessee/Oak Ridge National Lab, September 2014- September 2015, • <i>Assistant Professor</i> Istanbul Kemerburgaz University, September 2015,2017 Vice Dean of Graduate School of Sciences and Engineering August 2016-2017 • <i>Assistant Professor</i> Kadir Has University, September 2017,-
Steering Committee Membership, Reviewer Activities	<ul style="list-style-type: none"> • Steering Committee Member of Universities Power Engineering Conference, UPEC (starting from 2016) • International Symposium on Industrial Electronics, INDEL, Program Committee Member. • Electric Power Systems Research • Reviewer of Electric Power Components and Systems • Reviewer of Electrical Engineering (Archiv für Electrotechnik) • Reviewer of Turkish Journal of Electrical Engineering and Computer Sciences • Reviewer of IEEE PES General Meeting 2016 and 2017.
Journal Papers (SCI)	<ul style="list-style-type: none"> • Ritam Misra, Sumit Paudyal, Oğuzhan Ceylan, Paras Mandal and Bishnu P. Bhattarai, Harmonic distortion minimization in power grids with wind and electric vehicles, <i>Energies</i>, 2017, 10(7), 932, DOI: 10.3390/en10070932 • Oğuzhan Ceylan, Guodong Liu, Kevin Tomsovic, Coordinated distribution network control of tap changer transformers, capacitors and pv inverters, <i>Electrical Engineering</i>, 2017, pp. 1-14, DOI: 10.1007/s00202-017-0563-x • Oğuzhan Ceylan, Hasan Dağ, Aydoğan Özdemir, Heuristic methods for post outage voltage magnitude calculations, <i>Turkish Journal of Electrical Engineering and Computer Sciences</i>, 24, (2016), 105-120 DOI: 10.3906/elk-1301-124 • Oğuzhan Ceylan, Hasan Dağ, Aydoğan Özdemir, Double branch outage modeling and simulation: bounded network approach, <i>International Journal of Electrical Power and Energy Systems (Elsevier)</i>, Vol 73, December 2015 pp. 369-376 DOI: 10.1016/j.ijepes.2015.05.001 • Oğuzhan Ceylan, Hasan Dağ, Aydoğan Özdemir, Branch Outage Simulation Based Contingency Screening by Gravitational Search Algorithm, <i>International Review of Electrical Engineering (I.R.E.E)</i>, Vol 7, N. 1, January-February 2012, pp. 3370-3377.

**Journal Papers
(others)**

- Oğuzhan Ceylan, Michael Starke, Phil Irminger, Ben Ollis, Dan King, Kevin Tomsovic, Hourly day ahead solar irradiance forecasting model in Labview using cloud cover data, IU-Journal of Electrical and Electronics Engineering 16(2), 2016, pp. 2047-2054

**Papers with
Revisions**

- Jingyuan Wang, Sumit Paudyal, Guna Bharati, Oguzhan Ceylan, Bishnu Bhattarai and Kurt Myers, Hierarchical Coordinated Electric Vehicle Charging with Reactive Power Support to Grid, IEEE Transactions on Industrial Informatics

Conference Papers**International Conference Papers (Submitted/Accepted/Under Preparation)**

- Oğuzhan Ceylan, Sumit Paudyal, Bishnu P. Bhattarai and Kurt S. Myers. Photovoltaic hosting capacity with multiple injection nodes, to be presented at IEEE International Conference on Innovative Smart Grid Technologies IEEE ISGT Europe 2017, Torino, Italy, September 26-29, 2017.
- Oğuzhan Ceylan, Sumit Paudyal, Sudarshan Dahal. Assessment of harmonic distortion on distribution feeders with electric vehicles and residential PVs, submitted to 7th International Conference on Power Systems 2017, Pune, India December 21-23, 2017.

International Conference Papers

- E. Fatih Yetkin, Oğuzhan Ceylan, Soft error resiliency of power flow calculations, 52nd Universities Power Engineering Conference (UPEC) 2017, Heraklion, Crete, Greece August 28-31 2017.
- Georgios A. Barzegkar-Ntovom, Oğuzhan Ceylan, Theofilos A. Papadopoulos, Optimization techniques for parameter estimation of dynamic load models, 52nd Universities Power Engineering Conference (UPEC) 2017, Heraklion, Crete, Greece August 28-31 2017.
- Seyhan Tural, Oğuzhan Ceylan, Sumit Paudyal, Optimal voltage control in distribution feeders with large penetration of winf, 52nd Universities Power Engineering Conference (UPEC) 2017, Heraklion, Crete, Greece August 28-31 2017.
- Oğuzhan Ceylan, Sumit Paudyal, Optimal Capacitor Placement and Sizing Considering Load Profile Variations Using Moth Flame Optimization Algorithm, Modern Power Systems 2017, Cluj, Romania,
- Sumit Paudyal, Oğuzhan Ceylan, Bishnu P. Bhattarai and Kurt S. Myers. Optimal coordinated EV charging with reactive power support in constrained distribution grids, IEEE PES General Meeting 2017, Chicago, USA, July 16-20, 2017.
- Oğuzhan Ceylan, Sumit Paudyal, Optimal harmonic reduction in distribution grids with solar, wind and electric vehicles, submitted to 52nd Universities Power Engineering Conference (UPEC) 2017, Heraklion, Crete, Greece August 29-September 1 2017.
- Oğuzhan Ceylan, Harmonic elimination of multilevel inverters by moth-flame optimization algorithm, International Symposium on Industrial Electronics (INDEL), Banja Luka, Bosnia and Herzegovina, November 3-5 2016

- Funda Daylak, Oğuzhan Ceylan, Canan Zobi Karatekin, A Daily Multiobjective Optimization Model in Smart Grids, 51st Universities Power Engineering Conference (UPEC) 2016, Coimbra, Portugal, September 6-9 2016.
- Oğuzhan Ceylan, Gulsen Taskin, Comparison of Differential Evolution and Harmony Search Methods for SVM Model Selection in Hyperspectral Image Classification, IEEE International Geoscience and Remote Sensing Symposium, Beijing, China, July 10-15, 2016.
- Oğuzhan Ceylan, Aleksandar Dimitrovski, Michael Starke, Kevin Tomsovic, Optimal Reactive Power Allocation for Photovoltaic Inverters to Limit Transformer Tap Changes, IEEE PES General Meeting 2016, Boston, USA, July 17-21, 2016.
- Guodong Liu, Bailu Xiao, Michael Starke, Oğuzhan Ceylan, Kevin Tomsovic, A Robust Load Shedding Strategy for Microgrid Islanding Transition, 2016 IEEE PES Transmission and Distribution Conference and Exposition, Dallas, USA, May 2-5 2016
- Guodong Liu, Michael Starke, Oğuzhan Ceylan, Kevin Tomsovic, Advanced Energy Storage Management in Distribution Network, Hawaii International Conference on System Sciences (HICSS 49), Kauai, USA, Jan. 5-8 2016
- Oğuzhan Ceylan, Michael Starke, Phil Irminger, Ben Ollis, Kevin Tomsovic, A Regression Based Hourly Day Ahead Solar Irradiance Forecasting Model by Labview using Cloud Cover Data, 9th International Conference on Electrical and Electronics Engineering (ELECO 2015), Bursa, Turkey November. 26-28 2015
- Oğuzhan Ceylan, Guodong Liu, Kevin Tomsovic, Parallel Harmony Search Based Distributed Energy Resource Optimization, International Conference on Intelligent System Applications to Power Systems (ISAP 2015), Porto, Portugal, September 11-16, 2015.
- Guodong Liu, Oğuzhan Ceylan, Yan Xu, Kevin Tomsovic, Optimal Voltage Regulation for Unbalanced Distribution Networks Considering Distributed Energy Resources, IEEE PES General Meeting 2015, Denver, USA, July 26-30, 2015.
- Oğuzhan Ceylan, Guodong Liu, Yan Xu, Kevin Tomsovic, Distribution System Voltage Regulation by Distributed Energy Resources, North American Power Symposium (NAPS) 2014, Pullman, USA, September 7-9 2014.
- Guodong Liu, Yan Xu, Oğuzhan Ceylan, Kevin Tomsovic, A New Linearization Method of Unbalanced Electrical Distribution Networks, North American Power Symposium (NAPS) 2014, Pullman, USA, September 7-9 2014.
- Oğuzhan Ceylan, Aydoğan Özdemir, Harmony Search Algorithm for Optimal PMU Placement, The 17th International Conference on Intelligent System Applications to Power Systems (ISAP 2013), Tokyo, Japan, July 1-4 2013.
- Oğuzhan Ceylan, Aydoğan Özdemir, Hasan Dağ, Post-Outage Voltage Calculations for Double Branch Outages, 47th International Universities. Power Engineering Conference UPEC 2012, London, UK, September 4-7 2012.
- Oğuzhan Ceylan, Aydoğan Özdemir, Hasan Dağ, Double Branch Outage Modeling and Its Solution Using Differential Evolution Method, The 16th International Conference on Intelligent System Applications to Power Systems (ISAP 2011), Hersonissos, Crete, Greece, September 25-28 2011.
- Oğuzhan Ceylan, Hasan Dağ, Aydoğan Özdemir, Harmony Search Method Based Parallel Contingency Analysis., The 2010 International Conference on

Power System Technology, POWERCON2010, Hangzhou, China, October 24-28, 2010.

- Oğuzhan Ceylan, Aydoğan Özdemir, Hasan Dağ, Gravitational Search Algorithm for Post-Outage Bus Voltage Magnitude Calculations., 45th International Universities. Power Engineering Conference UPEC 2010, Cardiff-Wales, 31 August-3 September 2010.
- Oğuzhan Ceylan, Aydoğan Özdemir, Hasan Dağ, Comparison of Post Outage Bus Voltage Magnitudes Estimated by Harmony Search and Differential Evolution Methods, The 15th International Conference on Intelligent System Applications to Power Systems (ISAP 2009), Curitiba, Brazil, 8-12 November 2009.
- Oğuzhan Ceylan, Hasan Dağ, Aydoğan Özdemir, Parallel Contingency Analysis Using Differential Evolution Based Solution For Branch Outage Problem, Fifth International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control - ICSCCW 2009, North Cyprus, September 2-4 2009.
- Oğuzhan Ceylan, Aydoğan Özdemir, Hasan Dağ, .Towards Faster Branch Outage Simulations Using Simulated Annealing and Parallel Programming., The 44th International Universities Power Engineering Conference, UPEC 2009, Glasgow, SCOTLAND, September 1-4 2009.
- Oğuzhan Ceylan, Aydoğan Özdemir, Hasan Dağ, Application Of Differential Evolution Method to Branch Outage Problem (The 2009 International Conference on Genetic and Evolutionary Methods (GEM 2009), Las Vegas, USA, July 13-16 2009.
- Oğuzhan Ceylan, Aydoğan Özdemir, Hasan Dağ, Branch Outage Solution Using Particle Swarm Optimization, Australasian Power Engineering Conference (AUPEC 2008), Sydney, Australia, 14-17 Dec 2008.
- Oğuzhan Ceylan, Özcan Kalenderli, Parallel Computation of Two Dimensional Electric Field Distribution Using PETSC, International Conference of Computational Methods in Sciences and Engineering 2004 (ICCMSE 2004), Attica, Greece, November 19-23 2004.
- Oğuzhan Ceylan, Hasan Dağ, A Simple and Faster Algorithm to Determine Nash Equilibrium in a Bilateral Electricity Market, 5th International Power Systems Conference, Timisoara, 6-7 November 2003.

National Conference Papers

- Oğuzhan Ceylan, Gülşen Taşkın, SVM parameter selection based on harmony search with an application to hyperspectral image classification, 24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, May 16-19, 2016
- Oğuzhan Ceylan, Çağrı Acar Şaylan, İşıl Yenidoğan, Hasan Dağ, Intelligent Method Based Feature Selection Algorithms for Medical Data Sets, Ulusal Tıp Bilişimi Kongresi, Antalya, Turkey, 2012
- Hasan Dağ, Oğuzhan Ceylan, Metin Demiralp, Factorized High Dimensional Model Representation in Approximation of High Dimensional Transfer Equation, 12th National Mechanics Congress, Konya Turkey, September, 2001. (In Turkish)