

Tomislav Capuder

Academic title	PhD
Year and institution of PhD obtained	2014; University of Zagreb, Faculty of Electrical Engineering and Computing
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Citizenship	Croatian
Date and place of birth	04 October 1983, Zagreb, Croatia

WORK EXPERIENCE

Date (from – until)	October 2008 - ongoing
Institution	University of Zagreb, Faculty of Electrical Engineering and Computing
Position	Researcher
Work field	Multi Generation Systems, Smart Grids, Power System Planning

EDUCATION

Date	2014
Place	Zagreb
Institution	University of Zagreb, Faculty of Electrical Engineering and Computing
Title of qualification awarded	Philosophy Doctorate

RESEARCH AND OTHER PROJECTS

Scientific projects

- 1. Flexible energy nodes in low carbon smart grid (project leader: Prof. dr. sc. Igor Kuzle), 2014-2018
- 2. Embedding Renewable Energy Sources into an Active Distribution Network (international bilateral project - University of Zagreb and University of Novi Sad, funded by MZOŠ RH i MZTR RS), 2010 - 2013
- 3. MZOŠ 036-0361590-1587: Planning and Operation of Active Distribution Networks and Microgrids (project leader: Prof.dr.sc. Davor Škrlec), 2008 - 2011

MEMBERSHIP IN SCIENCE

ORGANIZATIONS AND BODIES

- **IEEE** (Institute of Electrical and Electronics Engineers), 2008 - ongoing
 - - IEEE Power and Energy Croatian Chapter vice president (2012 - ongoing)
- **CIGRE** (International Council On Large Electric Systems), 2009 - ongoing
- **SDEWES** (Sustainable Development of Energy, Water and Environment Systems), 2011 - ongoing

PAPERS

- **Journal papers:**

- Capuder, Tomislav; Mancarella Pierluigi: *Techno-economic and Environmental Modelling and Optimization of Flexible Distributed Multi-Generation Options.* // Energy. **71** (2014)
- Kuzle, Igor; Havelka, Juraj; Pandžić, Hrvoje; Capuder, Tomislav: *Hands-On Laboratory Course for Future Power System Experts.* // IEEE transactions on power systems. 29 (2014) , 4; 1963-1971
- Zidar, Matija; Georgilakis, Pavlos, Hatziargyriou, Nikos; Capuder, Tomislav; Škrlec, Davor: *Review of Energy Storage Allocation in Power Distribution Networks.* // submitted to IEEE Transactions on Power Systems
- Capuder, Tomislav; Pandžić, Hrvoje; Holjevac, Ninoslav, Zidar, Matija; Kuzle, Igor: *Visualization on Distribution System Planning for Engineers and Decision Makers.* // submitted to IEEE Transactions on Smart Grids
- Capuder, Tomislav; Zidar, Matija; Škrlec, Davor: [*Evolutionary Algorithm with Fuzzy Numbers for Planning Active Distribution Network.*](#) // Electrical engineering. **94** (2012)
- Sučić, Stjepan; Dragičević, Tomislav; Capuder, Tomislav; Delimar, Marko. [*Economic Dispatch of Virtual Power Plants In An Event-Driven Service-Oriented Framework Using Standards-Based Communications.*](#) // Electric power systems research. **81** (2011), 12; 2108-2119
- Capuder, Tomislav; Pandžić, Hrvoje; Kuzle, Igor; Škrlec, Davor. [*Specifics of Integration of Wind Power Plants into the Croatian Transmission Network*](#) // Applied

International conferences:

- Capuder, Tomislav; Mancarella, Pierluigi: Modelling and Assessment of the Techno-economic and Environmental Performance of Flexible Multi-Generation Systems // 18th Power System Computation Conference, Wroclaw, Poland, 2014
- Kuzle, Igor; Holjevac, Ninoslav; Capuder, Tomislav; Majić, Luka: Model Predictive Control for Scheduling of Flexible Microgrid Systems// Conference on Sustainable Development of Energy, Water and Environment Systems, Venice, Italy, 2014
- Capuder, Tomislav; Pandžić, Hrvoje; Bošnjak, Darjan; Kuzle, Igor; Škrlec, Davor. *Specifics of Integration of Wind Power Plants into the Croatian Transmission Network*// Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik, Croatia, 2011
- Capuder, Tomislav; Periša, Ivan; Hrkec, Dinko; Zidar, Matija; Tomiša, Tomislav; Škrlec, Davor. *Integration of Power Quality Monitoring System in Croatian Distribution Network* // 21st International Conference on Electricity Distribution (CIRED), Frankfurt, Germany, 2011
- Dragičević, Tomislav; Capuder, Tomislav; Jelavić, Mate; Škrlec, Davor. *Modeling and Simulation of Isolated DC Microgrids Supplied by Renewable Energy Resources* // Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik, Croatia, 2011
- Zidar, Matija; Capuder, Tomislav; Dragičević, Tomislav; Škrlec, Davor. *Planning of the Distribution Network Ogulin Using Optimization Tool CADDiN* // CIRED 21st International Conference on Electricity Distribution, Frankfurt, Germany, 2011
- Capuder, Tomislav; Pandžić, Hrvoje; Bošnjak, Darjan; Kuzle, Igor; Škrlec, Davor. *Analysis of Incentives Approach to Renewable Sources and Cogeneration* // Proceedings of the 2010 7th International Conference on the European Energy Market, Madrid, Spain 2010
- Capuder, Tomislav; Periša, Ivan; Škrlec, Davor. *Timeframe for strategy of modernizing Croatian distribution network SCADA* // IEEE Power&Energy Society General Meeting Proceedings. Minneapolis, Minnesota, USA, 2010
- Capuder, Tomislav; Periša, Ivan; Škrlec, Davor. *Smart Vision of the Croatian Distribution System* // Smart Grids and E-Mobility, Brussels, Belgium, 2010
- Capuder, Tomislav; Zidar, Matija; Škrlec, Davor. *Distributed Generation Integration Using Evolutionary Algorithm with Fuzzy Numbers* // Proceedings of 3rd Power Optimization and Control Conference, Gold Coast, Australia, 2010
- Carević, Sanela; Capuder, Tomislav; Delimar, Marko. *Applications of Clustering Algorithms in Long-term Load Forecasting* // Proceedings of 1st IEEE Energycon Conference, Manama, Bahrain, 2010
- Grganić, Hrvoje; Capuder, Tomislav; Delimar, Marko. *Croatian Electric Power System Modeling for Stability Analysis* // Proceedings of 1st IEEE Energycon Conference, Manama, Bahrain, 2010
- Škrlec, Davor; Kuzle, Igor; Delimar, Marko; Bošnjak, Darjan; Capuder, Tomislav; Pandžić, Hrvoje. *Large Scale Wind Power Plants Integration into the Croatian Power System* // Proceedings of EPE PEMC. Ohrid, Macedonia, 2010
- Capuder, Tomislav; Lugarić, Luka; Brekalo-Štrbić, Jurica; Krajcar, Slavko. *Optimizing the tramway power system in Zagreb* // 5th IEEE Vehicle Power and Propulsion Conference Proceedings. Dearborn, Michigan, USA 2009
- Kuzle, Igor; Škrlec, Davor; Bošnjak, Darjan; Capuder, Tomislav; Pandžić Hrvoje. *Connection of a DFIG-based Wind Farm to the*

Biography

- **Tomislav Capuder** was born 1983 in Zagreb, Croatia. He graduated at the Faculty of Electrical Engineering and Computing, Department of Energy and Power Systems in 2008 obtaining the title of Master of Electrical Engineering, and received his doctorate title from the same Faculty and Department in 2014. During 2012 and 2013 he was a visiting researcher at the University of Manchester. His teaching activities include teaching several classes at FER Department of Energy and Power Systems: Distribution Networks and Distributed Generation, Electric Power System Operation and Planning, Power Plants, Geoinformation Systems, Electric Power Market and Laboratory of Electrical Power Engineering.
- His areas of expertise include: Energy Systems Planning and Modelling, Integrated infrastructures, Distributed Energy Systems, Energy markets, Environmental Protection in Power System. Tomislav Capuder has published multiple journal and conference papers and has participated in over 50 industry sponsored projects related to various topics of power system planning and operation. In addition Tomislav Capuder is an editor of two books. He is a regular reviewer for several journals (Applied Energy, Energy, International Journal of Electrical Power and Energy Systems, Electric Power System Research, IEEE Transactions on Power Systems, International Transactions on Electrical Energy Systems) and numerous conferences. He is in the Editorial board of the International Journal of Computing and Optimization.
- Tomislav Capuder is a Vice-chair of IEEE Croatian Power and Energy Chapter. As an active IEEE member he served as a IEEE Energycon 2014 Program Track Chair, IEEE Eurocon 2013 Organizing Committee Chair, EEM 2011 conference Secretary, European Energy Market Steering Committee member in 2011 and 2012 and as IEEE SGWF 2010 conference Secretary. He is also a member of Croatian CIGRE and SDEWES.