
Electrical & Computer Engineering
S E M I N A R
Louisiana State University

IT Systems for Power System Operation

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Abstract—This presentation will examine the pivotal role of modern IT systems in energy management—including EMS, DMS, and SCADA—as the backbone of grid monitoring and control. It will explore the challenges of integrating renewable energy sources (RES) into the power system, emphasizing their impact on reliability and power quality, and will highlight potential applications of machine learning to enhance both grid stability and power quality.

Bio—Krzysztof Chmielowiec, Ph.D., Eng., is an Assistant Professor in the Department of Power Electronics and Energy Control Systems at AGH University of Science and Technology in Kraków, Poland. His research focuses on power system operations, power quality, distributed generation, and compliance testing of power equipment with modern grid codes.

Dr. Chmielowiec's work integrates power engineering expertise with advanced digital solutions to enhance the security, reliability, and efficiency of grid management. His current research interests include the convergence of IT and operational technologies, real-time monitoring, and intelligent control for next-generation energy systems.

He has authored and co-authored numerous scientific publications on power quality and distributed generation and actively collaborates with academic and industry partners to translate cutting-edge research into practical applications for power system operations.

When: Thursday, 25 September 2025, 10:00 - 11:00

Where: Room 3316E Patrick F. Taylor Hall

Info: <https://www.lsu.edu/eng/ece/seminar>

