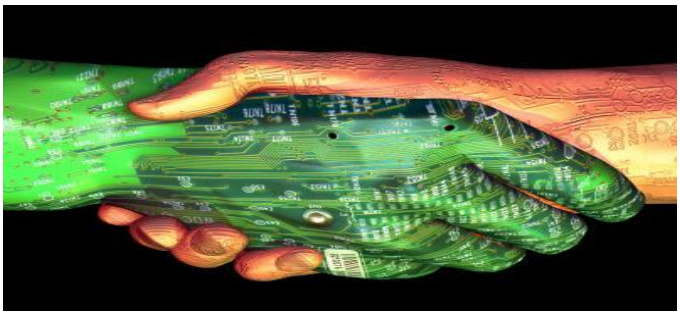
Webinar Event	**Analytics-Driven Cyber-Physical Security for a Converged Smart Grid**
Organized By	IEEE Control Systems & Instrumentation (CS&I) Southern Alberta Chapter
Date	May 5th, 2021, 12 PM to 1 PM (Canada/Mountain Time)
Speakers	**Deepa Kundur, Ph.D., P.Eng., F.I.E.E.E., F.C.A.E. Professor & Chair, The Edward S. Rogers Sr. Department of Electrical & Computer Engineering, University of Toronto**
Location	Online. Registration required (free for IEEE members and students, $10 for non-members)
Registration	**Click here to register**



Abstract

The field of cyber-physical security has evolved greatly over the last decade especially in the context of critical infrastructures such as the smart grid. The current challenges aim to address the increased sophistication of cyberattacks in the context of a more automated grid. Emerging polymorphic and stealthy attacks necessitate more coordinated and intelligent approaches to mitigation. In addition to the typical defense-in-depth paradigm, more harmonized protection and resilience strategies are essential. Development of next-generation tools for cyber-physical security requires the adoption of effective models that are compatible with salient trends in smart grid infrastructure including Information Technology/Operational Technology (IT/OT) convergence. The resulting data-rich cyber-physical environment from IT/OT convergence suggests a strong need for greater data-driven modelling paradigms and analytics. In this talk, we provide examples of deep learning in the context of anomaly detection for the cyber-physical protection of transmission protection systems. We then present a brave new world of opportunities for smart grid cyber-physical security using a data analytics-driven approach.

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Topic: Analytics-Driven Cyber-Physical Security for a Converged Smart Grid

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Dr. Kundur is Professor & Chair of The Edward S. Rogers Sr. Dept. of ECE at the University of Toronto. A native of Toronto, Canada, she received the B.A.Sc., M.A.Sc., and Ph.D. degrees all in Electrical and Computer Engineering in 1993, 1995, and 1999, respectively, from the Univ. of Toronto. Professor Kundur's research interests lie at the interface of cybersecurity, signal processing and complex dynamical networks. She is an author of over 200 journal and conference papers and is also a recognized authority on cyber security issues. She has served in numerous conference executive organization roles, and has participated on several editorial boards and federal government funding panels. She currently serves on the Advisory Board of IEEE Spectrum. Professor Kundur's research has received best paper recognitions at numerous venues including the 2015 IEEE Smart Grid Communications Conference, the 2015 IEEE Electrical Power and Energy Conference, the 2012 IEEE Canadian Conference on Electrical & Computer Engineering, the 2011 Cyber Security and Information Intelligence Research Workshop and the 2008 IEEE INFOCOM Workshop on Mission Critical Networks. She is a Fellow of the IEEE, a Fellow of the Canadian Academy of Engineering, and a Senior Fellow of Massey College.

Program for Wednesday, May 5th, 2021:

» 11:50 Webinar open
» 12:00 IEEE Southern Alberta announcements
» 12:05 Presentation by Dr. Kundur
» 12:45 Q&A
» 13:00 Webinar close

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