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UMaine Artificial Intelligence

Applications of Artificial Intelligence in Modeling, Control and Operation of Power Systems for Decarbonizing the Electric Grid

Thursday, April 6, 2023
12:00 - 1:00 p.m. EST (live via Zoom)

Reinaldo Tonkoski
Assistant Professor, Haskell Power Professorship
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Reinaldo Tonkoski (SMIEEE) is the Robert N. Haskell Power Professor in the Electrical and Computer Engineering Department at University of Maine - Orono. A 2011 PhD graduate from Concordia University, Dr. Tonkoski has authored over one hundred technical publications in peer reviewed journals and conferences and is currently an Editor of IEEE Systems Journal, IEEE Transactions on Sustainable Energy, and IEEE Access. He was a Peer Reviewer for the U.S. Department of Energy's Office of Electricity Energy Storage Program (2016-2018), providing critical assistance in guiding the execution of approximately $50M in annual energy storage research, and a consultant for the Honolulu Authority for Rapid Transportation project related to voltage regulation (2017-2019). His research interests include grid integration of sustainable energy technologies, power electronics and control systems. He was with CanmetENERGY, Natural Resources Canada, from 2009-2010 and a Visiting Professor at Sandia National Laboratories (2019-2020) where he worked on projects related to the grid integration of renewable energy sources and energy storage systems.

About this talk:

This presentation will explore the use of Artificial Intelligence (AI) in the modeling, control, and operation of power systems to decarbonize the electric grid. It will highlight how AI can be utilized to increase the integration of renewable energy sources into the grid while avoiding any integration issues. The talk will present innovative solutions and best practices for using AI to make power systems more efficient, reliable, and sustainable. By showcasing the potential of AI in this area, the presentation will demonstrate how it can play a key role in creating a more sustainable and equitable energy system for all.