



IEEE PES Schenectady Chapter Webinar (Virtual)



Application of Digital Twins for Future Intelligent and Sustainable Power and Energy Systems

Date:

Wednesday, June 21, 2023

Time:

12:00 to 01:00 PM, EDT

Location:

Virtual Event:

<https://meet.google.com/nav-vitz-gkt>

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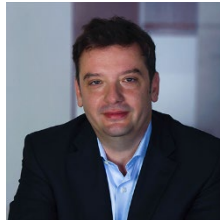
IEEE Schenectady Section Website:

<https://site.ieee.org/schenectady/>

Abstract:

Vannevar Bush's Differential Analyzer, as well as Apollo 13 mission physical twin were a few early examples of how system twins could provide transformational capability to engineers and scientist. With advent of modern Digital Twins, which brought fidelity, flexibility, ease of use, and the ability to evolve/adapt and learn digital twins have been fueling revolution in many disciplines including power electronics and intelligent power and energy systems. In this talk we will cover the history of power systems simulation and focus on advanced modeling and simulation of power electronics and digital power systems as they pertain to building future grid with deep penetration of renewables. We will highlight modeling and simulation of Battery Energy Storage Systems and focus on high-fidelity digital twin and hardware in the loop simulation and discuss vast opportunities that digital twin are bringing as modeling, data, and machine learning converge.

Speaker:



Dr. Ivan Celanovic is Co-founder and Chief Business Development Officer (CBDO) of Typhoon HIL Inc., and Principal Research Scientist at the MIT Institute for Soldier Nanotechnologies. His passion is developing, transitioning, and commercializing new and disruptive energy technologies with focus on future grid, e-Mobility, renewables, and energy storage. He is particularly passionate about transitioning fundamental research from a lab to commercial world. Dr. Celanovic has published over 80 journal publications, 5 patents, and two book chapters. He holds an Sc.D. degree from the Massachusetts Institute of Technology (MIT), Cambridge, an M.Sc. degree from Virginia Polytechnic Institute and State University, and a Diploma Engineer degree from the University of Novi Sad, Republic of Serbia, all in electrical engineering and computer science.