American Modelica Conference 2020

Online Conference

September 22nd – September 24th

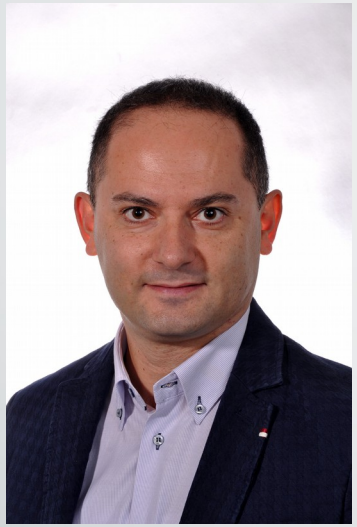
Mountain Daylight Time

Modelica Association

The North America Modelica Users' Group

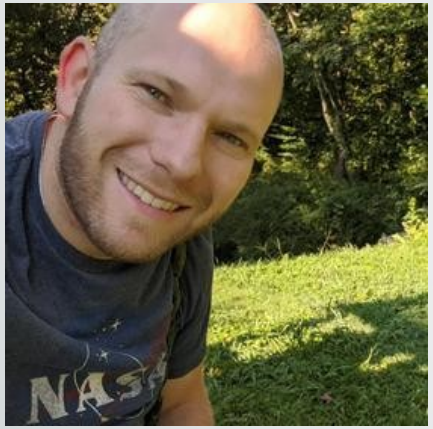
Giuseppe Laera, Session Chair

Users: Systems Applications I, Thursday 24th, 10:20am- 11:20am, Q&A 11:05



- PhD student of Electrical Engineering at Rensselaer Polytechnic Institute, Troy(NY), with research focusing on modeling of electric power systems and power electronics using Modelica and estimation of parameters for power systems models. He worked for more than five years on the construction, operation and maintenance of medium size PV power plants. He also worked as consultant power systems engineer for Solvina AB.

TRANSFORM: A Solution for Advanced System Modeling

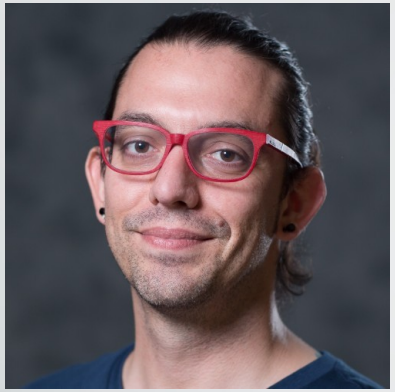


- Scott Greenwood (Oak Ridge National Laboratory)

- TRANSFORM: A Solution for Advanced System Modeling, Scott Greenwood (Oak Ridge National Laboratory)

Dr. M. Scott Greenwood is a research staff member of the Advanced Reactor Engineering Group at Oak Ridge National Laboratory. His research interests include advanced energy systems with a focus on the development and application of system modeling tools using modern modeling languages such as Modelica. Tools like the Modelica based ORNL TRANSFORM library, for example, will enable rapid prototyping and investigation of system level behaviors thereby shortening design and evaluation time for different nuclear reactor concepts. Dr. Greenwood earned his Ph.D. in Nuclear Engineering from the University of Wisconsin - Madison and his B.S. in Chemical Engineering from Brigham Young University

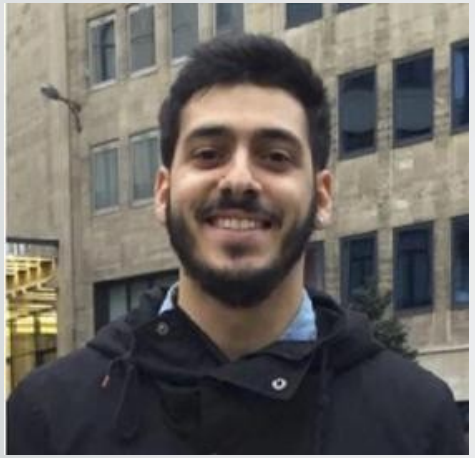
Teaching a Course on Modeling and Simulation for Cyber-Physical Systems using Modelica and FMI Technologies with Hands-on-Laboratories



- Luigi Vanfretti, Associate Professor (Rensselaer Polytechnic Institute)

Luigi Vanfretti is an Associate Professor at Rensselaer Polytechnic Institute, Troy, NY. He was previously an Associate Professor and Docent at KTH Royal Institute of Technology (2010-2017), where he led research in EU-funded projects such as iTesla, IDE4L and openCPS. He was a Special Advisor at the Norwegian transmission operator at Statnett SF (2013-2016) developing on synchrophasor data transfer, communications and PMU applications systems. Since joining RPI, Prof. Vanfretti's research has leveraged his experience and results to collaborate with industry in the United States in different research projects through state and federal grants. This includes collaborations with the New York Power Authority funded by the New York State Energy Research Development Agency under Projects No. 137951 and 137940, with Dominion Energy Virginia on model validation and Synchrophasor analytics projects and the NASA ULI CHEETA consortium, focusing on electrified aircraft systems where Modelica and FMI technologies are being exploited. His research experience spans several areas of electrical engineering including: cyber-physical modeling and simulation; real-time hardware-in-the-loop simulation; PMU/Synchrophasor technologies & systems, applications and analytics in transmission and distribution systems; AI/Machine Learning and system identification applications to power systems.

Open Instance Power System Library: a Modelica Library for Phasor Time-Domain Simulations



- Marcelo de Castro Fernandes (Rensselaer Polytechnic Institute)

- Open Instance Power System Library: a Modelica Library for Phasor Time-Domain Simulations, Marcelo de Castro Fernandes, Manuel Navarro, Luigi Vanfretti (Rensselaer Polytechnic Institute)

Marcelo de Castro Fernandes obtained his B.Sc. degree in electric power engineering at Federal University of Juiz de Fora, MG, Brazil in 2017. He is currently pursuing his Ph.D. degree in electric power engineering at Rensselaer Polytechnic Institute, Troy, NY, USA.

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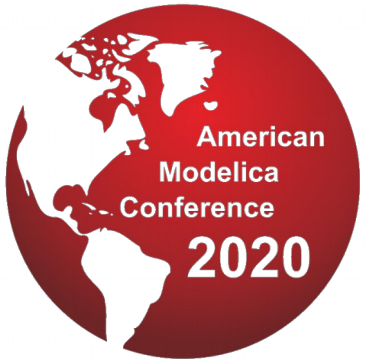

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