Smart Energy Seminar Series

24-November-2022, 8am – 4pm
Location: Room (SHA 024), Ontario Tech University, 2000 Simcoe Street North, Oshawa, ON L1G 0C5 (map below)

Seminar on
Computational Intelligence and Data-Driven Procedures for Energy Engineering

Professor Maurizio Repetto
Politecnico di Torino, Italy

Summary
This seminar will cover computational intelligence techniques and data analysis methods to support optimum deployment of energy systems. The seminar will discuss statistical analysis, regression, and classification methods, neural network training and applications on PV forecasting, heat and electricity load analysis.

To Register: please send an email to:
Dr. Hossam Gaber, hossam.gaber@ontariotechu.ca
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<tr>
<th>Time</th>
<th>Session</th>
<th>Topic</th>
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<tr>
<td>8:00 - 9:30am</td>
<td>Session-1</td>
<td>Introduction to AI in energy and industry, recalls of statistics and of optimization</td>
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<td>9:30 - 10:00am</td>
<td>Break</td>
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<td>10:00 - 11:30am</td>
<td>Session-2</td>
<td>Supervised learning and regression</td>
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<td>11:30 - 2:00pm</td>
<td>Break</td>
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<td>02:00 - 3:30pm</td>
<td>Session-3</td>
<td>Unsupervised learning and clustering; artificial neural network</td>
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<td>3:30 – 4:00pm</td>
<td>Discussions</td>
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Maurizio Repetto (Genova, Italy, 1960) received his Master and Ph. D. degrees in Electrical Engineering from the University of Genova.

Since year 2000 is full professor of Principle of Electrical Engineering at the Department of Energy "Galileo Ferraris" of the Politecnico di Torino.

From 2013 to 2017, Honorary Professor in the School of Information Technology and Electrical Engineering, The University of Queensland, Brisbane, Australia.

In 2018 visiting researcher at the University of Ontario Institute of Technology in Oshawa, Canada.

From October 2015 to September 2018 Coordinator of the Electrical Engineering curriculum at the Politecnico di Torino. Since October 2018 he is elected member for Europe in the Board of the International Compumag Society.

In February 2019 has been selected as expert for the Horizontal Working Group (HWG) on 100% Renewable Energy Districts of the of the Renewable Heating and Cooling (RHC) European Platform.

Since July 2020, designated as Alternate Representative for Italy in the Executive Committee of the International Energy Agency Implementing Agreement on District Heating & Cooling, including Combined Heat and Power (IEA DHC-TCP).

His research and consulting activity are focused on the numerical analysis of electromagnetic fields, on the modelling of magnetic materials, on the optimisation applied to the design of industrial devices and on the simulation and optimization of complex and hybrid energy systems with integration of renewable energy sources.

He is author of 219 publications and of five patents. Bibliometrics, listed in the major research databases (Scopus – accessed Jan 4th, 2022), attribute more than 2300 citations (h-index 26).