NSERC CREATE **TOP-SET** Un programme *FONCER* du CRSNG

Séminaire

Le mardi 30 avril 2019, 14h45
Des rafraîchissements seront servis dès 14h15
Complexe de recherche avancée, pièce 233
Université d'Ottawa, 25, rue Templeton
Le séminaire se déroulera en anglais.

Seminar

Tuesday, April 30, 2019, 2:45 p.m.
Refreshments to be served starting at 2:15 p.m.
Advanced Research Complex, room 233
University of Ottawa, 25 Templeton Street

DC micro-grids: Power delivery of the future

Suzan Eren, Queen's University

Abstract: Soon renewable energy sources such as wind and solar will be responsible for mainstream power generation. As a result, there is great interest in developing the technology necessary to bring renewable energy to the forefront. Micro-grids allow renewable energy systems to be integrated into the power system, which makes them an essential component of future power systems. There are three types of micro-grids: AC micro-grids, DC micro-grids and hybrid micro-grids. AC micro-grids have been a very active research topic because the current grid infrastructure is based on AC power delivery. Therefore, AC micro-grids can be integrated into the current infrastructure for the purpose of integrating renewable energy sources into the power system. However, the exponential growth of DC sources/loads (e.g., solar power, batteries, LEDs, smartphones, chargers, computers, servers, etc.) make the development of DC micro-grids desirable. This is because DC sources/loads are most efficiently used in a DC power architecture. DC micro-grids will be the building blocks of future power systems due to their superior performance in terms of efficiency and reliability. This research seminar will describe the challenges related to DC micro-grids and the research solutions that will make them a viable option for future power systems.

Bio: Dr. Suzan Eren is an Assistant Professor in the ECE Department at Queen's University, and a member of ePOWER, the Queen's Centre for Energy and Power Electronics Research. Dr. Eren received her BSc with first class honours, MSc and PhD degrees in Electrical Engineering from Queen's University in 2006, 2008, and 2013, respectively. She has received several academic scholarships, including the 2011-2012 Bert Wasmund Scholarship for Sustainable Energy Research. She has extensive academic and industrial experience developing highly efficient power converters. She has authored 38 peer-reviewed papers, holds 11 U.S. patents, and is the 2017-2018 and 2018-2019 recipient of the "Professor of the Year" award by the second year electrical engineering student body. Her research interests include the control and design of power converters used in micro-grids and renewable energy systems.

TOP-SET est un programme de formation FONCER du CRSNG en puissance optoélectronique ayant pour but de façonner une cohorte de personnel hautement qualifié détenant des connaissances approfondies en systèmes optoélectroniques pour joindre les rangs d'équipes de recherche et développement.

Pour de plus amples renseignements sur TOP-SET, veuillez consulter create-topset.eecs.uottawa.ca/fr.

NSERC CREATE Training in Optoelectronics for Power: from Science and Engineering to Technology (**TOP-SET**) is a training program that aims to form a cohort of highly qualified personnel with comprehensive understanding of optoelectronic systems, capable of joining advanced R&D teams.

For further details regarding TOP-SET, go to create-topset.eecs.uottawa.ca.

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