



**University of Regina's Microgrid Living Lab: Opportunities, Challenges,
and Future Applications**

January 26, 2024

12:00pm - 1:00pm

Location: ED 623

All are welcome and attendance is free but [registration is required](#).

The university was awarded \$976K from PrairiesCan through their Regional Innovation Ecosystems Program to establish a Microgrid research lab and testbed. The funding spans fiscal years 2022–23 and 2023–24, with the project concluding in March 2025. The U of R worked with Siemens Canada Ltd. to develop a research-based Microgrid lab with a mix of energy assets, which include photovoltaic generation, grid-compliant battery storage, loads, and a control center. The system was successfully commissioned in December 2023. In the past two years, the project team has provided several updates through a series of seminars. This seminar will provide an overview of the Microgrid system, project progress, opportunities and challenges, and future directions.

Speakers:



Dr. Irfan Al-Anbagi is an Associate Professor in the Faculty of Engineering and Applied Science at the University of Regina. He received his PhD degree in Electrical and Computer Engineering from the University of Ottawa in October 2013. From 2013 to 2015, he worked as a Postdoctoral Fellow and a Product Development Manager of the Secure Electric Vehicle System for the Smart Grids (SecCharge) Project, at the University of Ottawa. His research activities focus on internet of things (IoT) systems, wireless sensor networks (WSN), smart grid communication and information systems, including big-data analysis, system reliability and optimization, and cybersecurity. His journal article titled “A Survey on Cross-layer Quality of Service Approaches in WSNs for Delay and Reliability Aware Applications,” published in IEEE Communications Surveys & Tutorials, won

the 2017 Best Paper Award from the IEEE Communications Society’s Technical Committee on Communications Systems Integration and Modeling. Dr. Al-Anbagi is registered as a professional engineer with the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) and Professional Engineers Ontario (PEO). He is a senior IEEE member and the past chair of the IEEE South Saskatchewan section.



Mr. Doug Wagner is an Instructor in the Electronics Systems Engineering program at the University of Regina. He holds a Diploma of Technology (SAIT-1980), Bachelor of Applied Science (U of R 1990), and a Masters of Science (USask -2021). Doug is a member of APEGS, and holds Permission to Consult from the engineering association. Doug’s teaching is focused on the Power Systems focus area in the ESE program, along with engineering design, and specifically analog and power electronics design. In addition to his teaching areas, he is also interested in low cost, high-speed transmission line protection augmentation, and the emerging role of distributed generation at the utility level.



Mr. Mike Hodnefield, is a Project Manager at the University of Regina. He has held this position for about one year. Prior to this, Mike was the Manager of Electrical Services at the University for over 12 years. In his current role Mike mostly looks after all electrical projects for the U of R.



Ms. Lisa Vindevoghel is a Lab Instructor in the Electronics Systems Engineering program at the University of Regina. Lisa holds a Bachelor of Applied Science (U of R 2010). Lisa is a licenced member of APEGS and hold Permission to Consult from the engineering association. Lisa has practiced consulting Electrical Engineering for the past 12 years, prior to joining the faculty in March of 2022. Lisa's background includes consulting in both commercial and heavy industrial fields, resulting in design and project management experience for a variety of areas including power systems and distribution, communication systems, life safety systems, motor control, lighting and lighting control systems, infrastructure and feasibility studies etc.

A Continuation of the Decarbonizing Southern Saskatchewan Series

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