



**UAA College of Engineering**  
UNIVERSITY of ALASKA ANCHORAGE



UAA Professional Development Seminar Series

## **Integrated Design Considerations for Net Zero Energy, Resilient Solar Communities in the Canadian Context**

Presented by Caroline Hachem-Vermette, PhD

The design of new communities often lacks an integrated approach, with buildings designed without much consideration for environmental implications like energy consumption and GHG emissions. This presentation includes design considerations for integrated design of solar, net zero energy communities, highlighting the interactive nature of various design parameters to improve the energy performance, sustainability and climate resilience of these neighborhoods. These considerations are illustrated through practical design examples of different neighborhood scenarios and individual buildings, based on extensive studies and analysis of energy performance of a wide spectrum of buildings and neighborhoods.

Dr. Caroline Hachem-Vermette is an associate professor at the University of Calgary, School of Architecture, Planning and Landscape. She has a Master's degree in Architectural Engineering, and Master's and Ph.D. degrees in Building Engineering. Her research area is mainly directed towards developing procedures and tools for the design and assessment of resilient, energy self-sustained communities. This comprises the investigation of urban energy systems, including renewable and low impact energy sources, and their synergies, solar potential and energy implications of building design, and performance of multifunctional neighborhood patterns. Other research areas in which she is active include urban agriculture and its integration in the built environment, and affordable modular housing.

**Friday, November 8, 2019**

**11:45 am-12:45 pm**

**UAA College of Engineering, EIB 211**