



DIGITAL TWINS TO SUPPORT DECISION MAKING FOR URBAN DECARBONIZATION



Speaker:

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Location: Concordia University EV 3.309

ABSTRACT

The talk will discuss the role of urban digital twins for decision making in urban decarbonization of buildings and the mobility sector. It addresses the challenges of managing and harmonizing heterogeneous data of the urban built environment, the use of the data to build simulation models for decarbonization scenarios and the role of optimisation to size energy systems or to locate electric vehicle charging infrastructure.

BIOSKETCH

Ursula Eicker is the Canada Excellence Research Chair (CERC) in Smart, Sustainable and Resilient Communities and Cities and Founder and Director of the Next-Generation Cities Institute at Concordia University in Montréal. She works on decarbonization strategies for cities using living labs and urban digital twins for scenario modeling, user engagement and operational optimization.

Her research interests cover zero emission and smart cities, renewable energy integration, and sustainable urban infrastructure. With a team of about 50 graduate students and software developers she is working on multiple eco-district projects in Canada and builds the urban modeling and data analytics platform Tools4Cities. To engage users, 3D city models can be accessed via web interfaces or immersive gamification tools. Prof. Eicker has published 8 books, 20 book contributions, over 140 Peer-Reviewed Papers and more than 340 Conference Papers.