

## ***Resilient Design In Our Changing Climate***

Throughout history, communities have always had to adapt to changes in their climate and environment. But today, the current rate of global climate change is unusually high compared to the past. That's why it's important to plan ahead; protect assets; adapt to emerging stresses and risks; and reduce vulnerabilities.

Although resilient design must focus on flood prevention, wildfire resistance, winter storms endurance, and survivability after natural disasters, building designers are also beginning to appreciate a more everyday level of resilience. Whether buildings rely on natural or mechanical ventilation, maintaining acceptable levels of efficiency, comfort, and durability will likely become more difficult and expensive as the planet heats up.

This presentation will describe how research indicates the Manitoba climate is expected to change over the coming decades. To highlight change management in our profession, a discussion will be held exploring how changes in the design process can enable designers to understand future climate change and mitigate the design risks associated with it. In addition, there will be a focus on the use of energy modelling as a tool and how, with the use of future weather data, it can be used to examine future building performance and inform early design choices.

**Presenters: Melanie Chatfield, P.Eng. and Jordan Lanoway, P.Eng.**



Originally from the United Kingdom, Melanie works with both commercial and institutional clients to identify opportunities for energy conservation through operational and capital investment methods. As a senior energy modeller in Stantec's Winnipeg office, she understands the importance of including energy modelling early in the design timeline to meet the performance goals of her clients. She is a mechanical engineer who shares her expertise with Stantec's Sustainable and High Performance Building services in addition to multi-discipline project teams across the company. Melanie has been a LEED Accredited Professional since 2008 and is a member of the CaGBC's Experienced Modellers List.



Jordan is a mechanical engineer with a background in sustainable building design, envelope and mechanical systems, and project management. With over 10 years of engineering experience, Jordan brings a unique perspective to building design that focuses on energy and resource efficiency, while adhering to strict scope, schedule, and cost management. Jordan currently works as a Senior Project Manager within the Mechanical Engineering Group at Stantec Consulting in Winnipeg, and is currently involved in a variety of building projects including schools, healthcare, and industrial facilities. Jordan also sits on the Board of Directors for Sustainable Buildings Manitoba.