School of
Computer Science

MSc Seminar

Thursday Jul 19th at 1:00 PM in J.D. MacLachlan, Room 228

Bridging the Digital Divide in the Circumpolar North: A Community-led
Participatory Project in Rigolet, Nunatsiavut

Nicolas Durish

Advisor: Dr. Daniel Gillis
Advisory Committee: Dr. Ashlee Cunsolo
Advisory Committee: Dr. Sherilee Harper

ABSTRACT:

In 2016, the Government of Canada declared access to broadband internet a fundamental human right for all citizens. Despite this declaration, the Canadian Internet Registration Authority estimates that roughly 18% of the population in Canada has limited or non-existent connectivity, and many communities are entirely without cellular access. This is particularly true in Inuit Nunangat, where bandwidth is limited, internet connection is at times sporadic, competition between Internet service providers is scarce, and investment in infrastructure is currently lacking. These factors all contribute to a digital divide, wherein some communities are not granted equal access to online resources, are excluded from contributing to and competing in the Canadian economy in an equitable manner and are not provided an equal voice that is essential for active participation in a democratic society. On top of these impediments, a lack of digital resources is limiting Northern communities' ability to collect and share data that are collected as part of community-based health and environmental monitoring programs. To address the divide and its implications, the community of Rigolet, Nunatsiavut is investigating the use of Wireless Mobile Mesh Network's (WMMN) as part of the community-led eNuk health and environment monitoring program. These networks create a mesh of devices using Wi-Fi and Bluetooth technologies, allowing secure communication from phone-to-phone without the need for internet connectivity, which presents new opportunities for communication and data sharing.

This seminar will explore the motivations and obstacles in relation to the community of Rigolet's pursuit to develop the community-led health and environmental monitoring program eNuk. It will include an examination of: the inequitable effects of climatic changes on health, the benefits of community-based monitoring applications, the implications of the digital divide, potential frameworks and methodologies for quantifying the digital divide, and how WMMN's are being implemented to reduce the implications of the divide.