



***Maud Menten Institute /
Mathematical and Statistical Biology Seminar***

Monday, Dec 8, 2025

2:00pm CT

University of Manitoba – 225 St. Paul's College

-or-

[Join Zoom meeting](#)

Meeting ID: 699 6049 3994

Passcode: 900153

James Watmough

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**Disease-transmission in small, heterogeneous, populations:
How is it different? Why do we care?**

Roughly speaking, outbreaks of respiratory infections, such as measles, CoViD-19, and influenza, are shaped by two main factors: (1) the patterns and nature of contacts between individual hosts, and (2) the distribution of immunity locally and regionally within the host population. Contact patterns between hosts reflect community structure and the relative strengths of within-group and between-group contacts. This contact structure can be very different for smaller communities and larger metropolises. I will explore some of these differences and their implications for disease management using a variety of models and illustrations.

In Victoria: Attend the **UVic watch party (12pm PT)** Clearihue A-317

In Edmonton: Attend the **UofA watch party (1pm MT)** UComm 4-450