



**MMI**

Maud Menten Institute  
Mathematics for the Life Sciences



**University  
of Victoria**



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

**Monday, March 30, 2026**

**12 pm PST (in person)**

**Clearihue A-329**

*Join Zoom Meeting*

<https://uvic.zoom.us/j/81909983859>

**Meeting ID: 819 0998 3859**

**Password: 010303**

*Register in advance for this meeting:*

[https://uvic.zoom.us/meeting/register/IZOH7Yj\\_THCfApyKchme0A](https://uvic.zoom.us/meeting/register/IZOH7Yj_THCfApyKchme0A)

*After registering, you will receive a confirmation email containing information about joining the meeting.*

**Attend the Watch Party:**

At UAlberta @ 1:00 (MT) - room UComm 2-108

At UManitoba @2:00 (CT) - St. Paul's College - room 225

**Leah Edelstein-Keshet**

Department of Mathematics

University of British Columbia

**Species competition inside a cell and between cells**

The classic Lotka-Volterra model for species competition has traditionally been associated with ecological settings where living species compete for limited resources. Here I will discuss two recent examples from work in my group where similar ideas are helpful in models for cell biology. In example 1, two forms of sub-cellular structures compete for dominance. A protein that biases that competition (galvanic) can result in directed cell motility in an electric field. In example 2, an embryoid develops internal cavities (Lumens), but only one such lumen should survive for appropriate development. How a "winner" emerges can also be investigated with the aid of a modified species competition model.

