



Institute colloquium

[Online] Fluid dynamics of living cells

Michael J. Shelley

Flatiron Institute, Simons Foundation

Host: Björn Hof

The organized movement of intracellular fluids is part of the functioning of cells and the development of organisms. These flows often arise from the action of molecular motors on the transitory and flexible scaffoldings of the cell. That sounds complex and multiscaled, as is much of biology, but its study is also becoming a beautiful sub-branch of fluid dynamics characterized by geometric complexity, confinement, and microscale activity. Understanding phenomena in this realm has necessitated the development of new simulation tools, and of new coarse-grain mathematical models to analyze and simulate. In that context, I'll discuss how genetic material is "properly" positioned within a cell, how a symmetry-breaking "swirling" instability may be an important part of the development of an oocyte, and how flows in the nucleus give us clues to its internal mechanics. How to attend: Registration is required to join this online talk. Registered participants will receive an email with details on how to join the talk within 24 hours before it begins.

Monday, November 9, 2020 04:00pm - 05:00pm

Online



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.