1163-92-293   **Christopher E Miles*** (`christopher.miles@cims.nyu.edu`) and **Alex Mogilner**.
Understanding mitotic spatiotemporal trajectories with modeling and data science.

For cells to divide, they must spatially organize their copied DNA (chromosomes) quickly and precisely. This process, called mitosis, is one of the most fundamental processes in biology, but due to its complexity, remains far from fully understood. Recent experimental advances provide 3D spatial trajectories of chromosomes during mitosis. These trajectories can be thought of as non-stationary stochastic paths, leading to challenges in applying tools typically applied to particle trajectories. I will discuss our attempts to use classical data science and topological analyses to explore whether these trajectories reveal anything about models and mechanisms driving them. (Received September 01, 2020)