

Modelling collective cell dynamics using active matter physics

Thursday, August 10, 2023 2:00 PM (50 minutes)

The motion of epithelial cells is key to many life processes from morphogenesis to wound healing. Despite its importance, and considerable recent attention, much remains to be understood about collective cell motility, both in terms of elucidating the underlying biochemistry, and at a more coarse-grained level of identifying the primary forces involved.

In this talk I will describe recent work modelling confluent cell layers and tissues using phase field and hydrodynamic models and discuss the extent to which approaches based on active matter physics are proving useful in interpreting tissue dynamics and patterning.

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