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(I) Embryonic tissues as active matter: modelling developmental processes

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The material state of embryonic tissues emerges from the collective interactions of cells. Most tissues are soft active materials that can flow or deform. This deformability is shown to be important for proper embryonic development. However, cell and tissue mechanics are experimentally difficult to probe in developing animals. Here, I will discuss our research developing computational and theoretical models to investigate how tissue material properties affect cellular functions and coordination. I will present verifiable mathematical models and predictions that we developed for various developmental processes.

Keyword-1

Collective Cell Behavior

Keyword-2

Cell and Tissue Mechanics

Keyword-3

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