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## Physics of small cell aggregates

*mercredi 5 juillet 2023 14:00 (45 minutes)*

Biological tissues self-organise thanks to patterning processes coupled to cellular mechanical interactions, which play a fundamental role in driving coordinated cell movements. Here I will discuss how polarity-oriented active mechanical forces drive collective cell motion in three dimensions. I will introduce the framework of « interacting active surfaces », which describe cell aggregates as mechanically coupled flowing active surfaces. I will discuss the three-dimensional rotational motion of cell doublets, which arise from polarised distribution of myosins in the actomyosin cortex of the doublet cells. I will discuss how the shape of the doublet interface can be understood from an analysis of the group of symmetry of the cell doublet and application of the Curie principle.

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