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Modelling interacting filaments in motility assays

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Abstract content
 (Max 300 words)

Motility assays are two-dimensional arrays in which certain types of biofilaments are pushed along the surface in a direction given by the orientation of the filament. The filaments interact with each other and with geometrical obstacles. We present a theoretical description for the resulting collective motion of the filaments. This rests on a suitable formalism for the directional re-orientation mechanism, that will be described in detail in this talk. We shall also discuss stochastic aspects of the velocity profile of individual filaments.

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