INTERNSHIP TITLE	**Active Microswimmers in Complex Fluids**
MASTER-2 AND/OR PHD	Possibility to continue with a PhD (ANR and GPR projects submitted)
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RESEARCH PROJECT

The research project deals with the study of self-propelled (also called active) particles, and aims at understanding their spatio-temporal organization in crowded environments such as biological media, as well as their associated collective effects. Specifically, we will use biological microswimmers, namely different strains of bacteria, which have been genetically modified to display fluorescence, improving therefore their tracking by optical microscopy. Our goal is to investigate the behavior and organization of microswimmers in complex fluids with various patterns and topologies, such as liquid crystalline order, to direct their individual and collective swimming. Such a control of active matter motility and directional taxis through a complex environment has a great potential to develop smart therapeutics with targeted drug delivery capabilities.

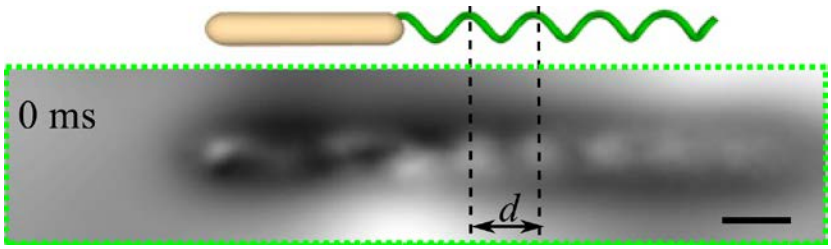

Figure: Distorsion of a liquid crystal by a swimming bacteria. Scale bar : 5µm

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