

3rd Lorenz Kramer Memorial Lecture

Magnetic Snakes

Self-Propelled, Self-Assembled

... and Furious

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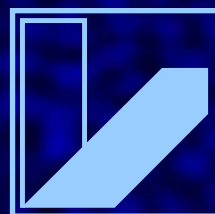
Public Lecture

September 30th, 5.30 pm
NW II, Lecture Hall H18
University of Bayreuth

The mechanisms of self-propulsion of living microorganisms are a fascinating phenomenon attracting enormous attention in the physics community. A new type of self-assembled microswimmers, *magnetic snakes*, is an excellent tool to model locomotion in a simple table-top experiment. The snakes self-assemble from a dispersion of magnetic microparticles suspended on the liquid-air interface and subjected to an alternating magnetic field. Magnetic snakes often behave like true living organisms, exhibiting 'hunting' and 'chemotaxis'. General tools of nonlinear dynamics, the research field of Lorenz Kramer, yield fundamental insights into magnetic snakes' self-assembly and locomotion.

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<http://www.nonlinear.uni-bayreuth.de>