

3. Lorenz-Kramer-Gedenkvorlesung

# Magnetic Snakes

Self-Propelled, Self-Assembled

... and Furious

**Prof. Dr. Igor Aronson**

Material Science Division  
Argonne National Laboratory  
Argonne, Illinois, USA

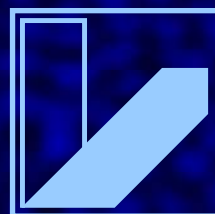
**Öffentlicher Vortrag**

30. September, 17.30 Uhr  
NW II, Hörsaal H18  
Universität 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.

FER Nonlinear Dynamics 08

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