

Curriculum Vitae

Prof. Holger Stark

Date/ place of birth	August 19th, 1963 / Stuttgart, Germany
Affiliation	Institut für Theoretische Physik, Sekr. PN 7-1 TU Berlin, Hardenbergstraße 36, 10623 Berlin
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Scientific vita

2007-	professor for theoretical physics, TU Berlin
2006-2007	group leader, MPI for Dynamics and Self-Organization
2006	visiting professor, LMU München
2004	visiting professor, Universität Konstanz
2001-2006	teaching and research, Universität Konstanz
1999	habilitation in theoretical physics, Universität Stuttgart
1998-2006	several research visits to the USA and Japan
1996-2000	research associate, Universität Stuttgart
1994-1996	postdoctoral research associate, UPenn, Philadelphia, USA
1993	Dr. rer. nat. in physics, Universität Stuttgart

Research fields

- soft condensed matter (including liquid crystals, colloidal dispersions, cellular structures, (bio-)polymers), and their structure formation at interfaces
- hydrodynamics and control of complex fluids, microfluidics
- soft condensed matter and biological systems in non-equilibrium, active motion
- hydrodynamic problems in biological physics, locomotion of microorganisms, artificial swimmers
- biomimetic materials and biomechanics

Awards and Scholarships

2000-2006	Heisenberg fellowship (DFG)
1994-1996	research scholarship (DFG)

Further activities (selection)

- Member of steering committee of priority program 1726, Microswimmers – From Single Particle Motion to Collective Behaviour (SPP 1726), since 2014
- Chairman of the RTG on Nonequilibrium Collective Dynamics in Condensed Matter and Biological Systems (GRK 1558), since 2009
- Editor of European Physical Journal E, Europhysics Letters, and Journal of Non-Equil. Thermodynamics
- Referee for Nature, Science, PNAS, Nature Materials, Physical Review Letters, etc.
- Referee for several national science organizations (DFG, SNF, EPSRC, etc.)
- Organizer of various International Workshops and Conferences
- Numerous invited lectures on conferences, workshops, at universities and research institutions

Selected Publications

1. A. Zöttl and H. Stark,
Topical Review: Emergent behavior in active colloids,
J. Phys.: Condens. Matter **28**, 253001 (2016).
2. A. Zöttl and H. Stark,
Hydrodynamics Determines Collective Motion and Phase Behavior of Active Colloids in Quasi-Two-Dimensional Confinement,
Phys. Rev. Lett. **112**, 118101 (2014).
published as “Editors’ suggestion” and highlighted by pro-physik
3. M. Schmitt and H. Stark,
Swimming active droplet: A theoretical analysis,
Europhys. Lett. **101**, 44008 (2013).
4. A. Zöttl and H. Stark,
Nonlinear dynamics of a microswimmer in Poiseuille flow,
Phys. Rev. Lett. **108**, 218104 (2012).
5. M. Enculescu and H. Stark,
Active colloidal suspensions exhibit polar order under gravity,
Phys. Rev. Lett. **107**, 058301 (2011).
published as “Editors’ suggestion”
6. M. Schmiedeberg and H. Stark,
Colloidal ordering on a 2D quasicrystalline substrate,
Phys. Rev. Lett. **101**, 218302 (2008).
7. E. Gauger and H. Stark,
Numerical Study of a Microscopic Artificial Swimmer,
Phys. Rev. E. **74**, 021907 (2006).
8. M. Reichert and H. Stark,
Synchronization of Rotating Helices by Hydrodynamic Interactions,
Eur. Phys. J. E. **17**, 493 (2005).
9. H. Stark and T. Lubensky,
A Poisson-Bracket Approach to the Dynamics of Nematic Liquid Crystals,
Phys. Rev. E **67**, 061709 (2003).
10. P. Poulin, H. Stark, T. C. Lubensky, and D. A. Weitz,
Colloidal Interactions in Anisotropic Fluids,
Science **275**, 1770 (1997).