

Programme: SPP 1726: Microswimmers
Annual Meeting 26-27 April 2018

26 April 2018

08.15 Departure from Ibis Hotel

08.30-09.00: Registration

09.10-09.15: Opening

09.15-10.55: Session 1

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| 1) Kyle Baldwin | Active nematic double emulsions |
| 2) Anna Eichler-Wolf | Active colloidal particles and clusters in the microfluidic channels |
| 3) Celia Lozano | Rapid dynamics of microswimmers in crowded environments |
| 4) Johannes Sachs | Does a propeller have to be chiral? |
| 5) Frank Cichos | Feedback Controlled Hot Microswimmers |

10.55-11.20: Coffee Break

11.20-13.00: Session 2

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| 6) Jens Elgeti | Collective Dynamics of Self-propelled Semiflexible Filaments |
| 8) Agnese Codutti | Chemotaxis of magnetic cells |
| 9) Benjamin Friedrich | Collective dynamics of cilia: from $n=2$ to $n \gg 1$ |
| 10) Alexander Sukhov | Dynamics of triangular magnetocapillary swimmers |

13.00-14.20 Lunch

14.20-15.20 Session 3

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| 11) Michael Kuron | The Influence of Ionic and Reactive Screening on Hydrodynamic Interactions between Swimmers |
| 13) An Gong | Sperm Spirograph |

15.20-16.20 Coffee Break + Poster session

16.20-17.40 Session 4

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| 14) Hendrik Ender | Bead-spring microswimmers in confinement |
| 15) Christian Hoell | Dynamical density functional theory for microswimmers |
| 16) Shubhadeep Mandal | Active Flow in a Nematic Swimmer |
| 17) Ahmed Mouran | Microgels that Swim on the Beat of Light |

18.00 – 20.30 Dinner at Caesar

20.30 Bus to Ibis

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08.45: departure from Ibis hotel

09.15-10.55 Session 5

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| 18) Ran Niu | Modular micro-swimming |
| 19) Marisol Ripoll | Hydrodynamic front-like swarming of phoretically active dimeric colloids |
| 20) David Feldmann | Light-driven diffusioosmosis: from active manipulation over self-propulsion to collective behaviour of small particles at solid liquid interfaces. |
| 21) Friedrich Striggow | Sperm-driven micromotors in oviduct fluid and highly viscous media |
| 22) Andreas Fischer | Active particles: Phase behavior and role of interactions |

10.55-11.20 Coffee break

11.20-13.00: Session 6

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| 23) Felix Rühle | Squirmers microswimmers under gravity |
| 24) Thomas Voigtmann | Glass transition and MIPS in active Brownian hard disks |
| 25) Mahdiyeh Mousavi | Wall Entrapment of swimming bacteria |
| 26) Juliane Simmchen | Light driven microswimmers |
| 27) William Uspal | Taxis of active colloids by photochemical activity or external flows |

13.00-13.05 Conference Photo

13.05-14.20 Lunch

14.20-14.40 Announcements / Organizational

14.40-15.40 Session 7

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| 28) Knut Drescher | Machine learning the space-time phase diagram of bacterial swarming |
| 29) Nathalie Jurisch-Yaksi | The function of motile-cilia driven flow in the nervous system |
| 30) Mojdeh Heidari | Active colloids near polymer functionalized substrate |

15.40-16.00 Final discussion and concluding remarks

16.00 Departure

List of Posters

- 1) Corinna Maaß Active Nematic Emulsions
- 2) Anna Eichler Photochemically driven Janus swimmers and their interaction with the passive beads
- 3) Celia Lozano Dynamical Trapping of Synthetic Microswimmers in Active Travelling Waves
- 4) Fatemeh Alidadi Soleymani Simulation Of Thermophoretic Particles with Energy Conserving Dissipative Particle Dynamics
- 5) Sven Auschra Thermotaxis of Phoretic Microswimmers
- 6) Santiago Muiños Landin Active Systems Learning at the Microscale
- 7) Klaus Kroy Microscopic derivation of the hydrodynamics of active-Brownian-particle suspensions.
- 8) Gerrit Vliegenthart Motor filament mixtures
- 9) Anton Solovev In-phase and anti-phase flagellar synchronization by basal coupling
- 10) Christian Holm Simulating Swimmers in Complex Environments
- 11) Jan Niklas Hansen High-precision tracking of the sperm flagellum
- 12) Fedir Lavryk Ultra-weak signals detection by sperm
- 13) Soudeh Jahanshahi Colloidal Brazil nut effect in microswimmer mixtures induced by a motility pattern
- 14) Shubhadeep Mandal Active Flow in a Nematic Swimmer
- 15) Denis Botin Influence of Cargo and Substrate on the Modular Micro-Swimmer
- 16) Sergi Roca Self-propelled swimming trimers
- 17) Pooja Arya Light generated hydrodynamic repulsion of artificial microswimmers.
- 18) Mariana Medina Sánchez Spermibots for assisted fertilization and targeted drug delivery
- 19) Arne W. Zantop Elongated microswimmers: Influence of hydrodynamics
- 20) Julian Reichert Mode-Coupling Theory for Active Brownian Particles - Anisotropic and Sheared Systems
- 21) Kai Qi Clustering of Active Colloids - Influence of Shape and Hydrodynamics
- 22) Linlin Wang TiO₂ shepherds gathering SiO₂ flocks
- 23) Serhat Kaya microscopy as tool for swimming characterization
- 24) Christa Ringers The role of second messengers in the regulation of ciliary beating.