

Martin James

Curriculum Vitae

Doctoral Researcher
Max Planck Institute for
Dynamics and Self-Organization
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Education

- 2016-till date **PhD student**, *University of Goettingen*, Goettingen, Germany.
Thesis: *Turbulence and pattern formation in continuum models for active matter*
Advisor: Dr. Michael Wilczek, *MPI for Dynamics and Self-Organization*, Göttingen
- 2011-16 **BSc and MSc in Physics**, *Indian Institute of Science*, Bangalore, India.
Minor in Mathematics

Publications

1. **Martin James**, W.J.T. Bos and M. Wilczek, '*Turbulence and turbulent pattern formation in a minimal model for active fluids*' *Phys. Rev. Fluids* **3** 061101(R) (2018)
2. **Martin James** and M. Wilczek, '*Vortex dynamics and Lagrangian statistics in a model for active turbulence*' *Europ. Phys. J. E* **41** 21 (2018)
3. **Martin James** and S.S. Ray, '*Enhanced droplet collision rates and impact velocities in turbulent flows: The effect of poly-dispersity and transient phases*' *Sci. Rep.* **7**, 12231 (2017)

Conferences and Workshops

- '*Dynamical phases in a model for active fluids*', 71st Annual Meeting of the American Physical Society's Division of Fluid Dynamics, Atlanta, USA (November, 2018)
- '*Pattern formation in a generalized Navier-Stokes model for active fluids*', Dynamics Days Europe, Loughborough, UK (September 2018)
- '*A Statistical Theory for Bacterial Turbulence*', Third Infinity conference, Göttingen, Germany (October 2017)
- Visions in Science conference, Berlin, Germany (September 2017)
- '*Statistical Features of Bacterial Turbulence*', Dynamics Days Europe, Szeged, Hungary (June 2017) (poster presentation)
- '*Statistical Features of Active Turbulence*', Spring Meeting of the German Physical Society, Dresden, Germany (March 2017)
- '*Poly-disperse suspension of inertial particles in turbulence*', European Postgraduate Fluid Dynamics Conference, Warsaw, Poland (July 2016) (poster presentation)
- EuHIT School on turbulence, Warsaw, Poland (July 2016)

Teaching Experience

- Co-advised the batchelors thesis of Dominik A. Suchla (Faculty of Physics, University of Goettingen) during the winter semester of 2018-19
- Tutor for *Turbulence Meets Active Matter* course offered at Faculty of Physics, University of Goettingen during the winter semester of 2018-19
- Tutor for *Thermodynamics and Statistical Mechanics* course offered at Faculty of Physics, University of Goettingen during the winter semester of 2017-18
- Tutor for *Scientific Computing for Physicists* course offered at Faculty of Physics, University of Goettingen during the summer semester of 2017

Scholastic Achievements

- International Max Planck Research School (IMPRS) fellow of the Physics of Biological and Complex Systems (PBCS) school of Max Planck society (2016-till date)
- Kishore Vaigyanik Protsahan Yojana (KVPY) fellow (Department of Science and Technology, Government of India) (2011-16)
- National Talent Search Program (NTSE) Scholar (National Council for Education Research and Training, Government of India) (2009-11)

Updated on February 28, 2019