

Postdoctoral position in modeling and simulation of active magnetic suspensions

A two-year postdoctoral position with starting date of April 2016 or as soon as possible thereafter is available in the group of Dr. Sara Jabbari-Farouji in the Statistical Physics and Soft Matter Theory sector at Johannes Gutenberg University Mainz, Germany.

We welcome applications from postdoctoral candidates interested in a combined theoretical and numerical description of self-propelled magnetic swimmers. In this research project, you will employ a multiscale approach by combining microscopic dynamic simulations of self-propelled anisotropic magnetic suspensions with a mesoscopic kinetic model. Our aim is to link particle-based models with effective hydrodynamic models and to investigate the interplay of internal and external drive on magnetoviscous and viscoelastic response of active magnetic suspensions.

The position provides ample opportunities for strong interactions with local and international collaborators. The successful candidate will join the research collaborative center TRR 146 “Multiscale simulations methods for Soft-Matter systems” (<http://trr146.de/>) and will benefit strongly from intensive exchange with other TRR146 members. In addition, you will profit from collaborative links to experimental group of Prof. Eric Clement (ESPCI, Paris) who works on active fluids and particularly on magnetotactic bacterial suspensions and other international experts in the field.

The successful candidate will be employed by Johannes Gutenberg University of Mainz. The postdoctoral funding is available until 30th June 2018. The salary is according to the German public service scheme TV-L E13 and depends on the previous research experience. Benefits include full health care coverage for the postdoc and his or her dependents. Additionally, some allowance is available for travel expenses to conferences and international collaborations.

Applicants should have completed a PhD in Physics, Chemical Physics, Applied Mathematics, or Engineering. We are looking for a candidate with a strong background in soft matter theory and statistical physics and a significant experience in molecular simulations. Previous experience with cross-disciplinary projects involving hydrodynamics and biophysics is desirable.

For more information and informal inquiries, please contact the PI Sara Jabbari-Farouji directly. To apply for this position please send an application letter, a CV that includes a publication list and the contact information of at least 2 references to sjabbari@uni-mainz.de. Consideration of candidates will continue until the position is filled. For primary consideration, applicants are encouraged to apply before **March 16th, 2016**.

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