

The Theoretical Polymer Physics Group of the University of Freiburg in Cooperation with the Research Group "Shock Waves in Soft Biological Matter", Fraunhofer-Institute for High-Speed Dynamics, Ernst-Mach-Institute, EMI, Freiburg invite applications in the framework of a project funded by the German Science Foundation (DFG). The first appointments will be for three years, starting as soon as possible.

2 PhD Student Positions in Theoretical and Computational Physics available

„Theoretical Description and Numerical Simulation of Hyperbranched Polymers“

The PhD students will work on a challenging project at the forefront of current research. The aim of the project is the development of new theoretical approaches for the description of the mechanical and dynamic properties of hyperbranched polymer structures, as well as performing appropriate numerical simulations on the supercomputing cluster of the Ernst-Mach-Institute. Hyperbranched, hierarchically structured polymers play an important role in theory and applications, ranging from new dynamical features to serving as model systems for the cytoskeleton of cells.

The work will be conducted in the Theoretical Polymer Physics group at the University of Freiburg and will be jointly supervised by Prof. Dr. Alexander Blumen (University of Freiburg) and by Dr. Martin O. Steinhauser (Fraunhofer-Institute). Both research groups have a strong record in Complex Systems and have close ties to Theoretical Chemistry and to the School of Soft Matter Research at the Freiburg Institute of Advanced Studies (FRIAS). The PhD candidates will also profit from the newly established International Research Training Group, which involves Soft-Matter Research Groups at the Universities of Freiburg, Strasbourg and Basel.

We seek candidates with a strong inclination toward Theoretical Physics, with a very good Diploma or Master's degree in Physics (or in Mathematics or Chemistry, with a good physical background). Experience with analytical modeling techniques in Polymer or Statistical Physics, as well as good programming skills are highly welcome.

For further information please contact

Prof. Dr. Alexander Blumen (blumen@physik.uni-freiburg.de) or

Dr. Martin O. Steinhauser (martin.steinhauser@emi.fraunhofer.de)

where you can also send your application (preferably as PDF via e-mail) including the CV, the copies of diplomas and a short statement of interest.