

Postdoctoral Fellows and Phd Positions in computational solid state spin phenomena physics Johannes Gutenberg-Universität Mainz, Germany

We are pleased to announce the opening of PostDoc and PhD positions in computational solid-state physics in the Institute of Physics at the Johannes Gutenberg-Universität Mainz **working on ab initio and phenomenological theory development of unconventional magnetism with topological properties**. The appointment involves research under supervision of **Jairo Sinova** in direct collaboration with MPI-Dresden group of **Libor Šmejkal**. A strong interaction will also take place with **Olena Gomonay**, **Ricardo Zarzuela**, and **Alexander Mook (Emmy Neuther Group)**, and with the experimental and theoretical research partners in Mainz. The Sinova Group conducts research in a broad range of topics related to spin phenomena and theoretical condensed matter physics. Furthermore, the position incorporates the opportunity within SPICE, the Spin Phenomena Interdisciplinary Center, and two SFB centers (SFB Spin+X, SFB ElastoQmat) to lead interdisciplinary research. The PostDoc position is initially open for two years with a possible elongation up to 3 years, the PhD positions is open for 3 years.

A strong background in ab initio computational techniques and calculations at medium and large-computing-infrastructures is required. Candidates interested and/or experienced in ab initio calculations of electronic structure, topological invariants, and linear response coefficients and with experience with using supercomputing facilities and maintaining computer clusters are highly suited for this opportunity. Further information can be found on the websites <http://www.sinova-group.physik.uni-mainz.de/>, and <http://www.spice.uni-mainz.de/>. The prospective group member must hold a MSc (for a PhD position) or PhD degree (for a postdoc position). An experience with VASP, Wannier90 package, WannierTools package and similar, bash/python scripting, python scientific libraries, code-parallelization, machine learning, and/or knowledge of topological insulators and semimetals, and spintronics is an advantage.

Johannes Gutenberg-Universität Mainz is an equal opportunity, affirmative action employer in compliance with German disability laws. Women and persons with disabilities are encouraged to apply.

Review of applications begins immediately and will continue until the position is filled. Interested applicants should send a curriculum vitae, a list of publications, and at least two letters of recommendation to sinova-group@uni-mainz.de. When sending applications please use the subject line "Computational position application" and specify interest in Phd or Postdoc position.

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