

**The Center of Advanced Systems Understanding (CASUS), Helmholtz-Zentrum
Dresden-Rossendorf, Görlitz, Germany**

and

the Fritz Haber Research Center (FHRC), Hebrew University of Jerusalem, Israel

seek a talented and prospective postdoctoral researcher to pursue cutting-edge research in the field of electronic structure theory with applications in warm dense matter.

The research project is a joint initiative of Dr. Attila Cangi (CASUS) and Dr. Eli Kraisler (FHRC). It involves development and application of novel, temperature-dependent approximations to the electron-electron interaction, within density-functional theory (DFT), particularly suitable to warm dense matter (WDM). WDM is a challenging frontier at the intersection of condensed matter and plasma physics. Our strong ties to our experimental partner institutions (such as the Helmholtz International Beamline for Extreme Fields at the European XFEL) enable benchmarking and applying the developed methodology under the realistic conditions of X-Ray scattering experiments.

Requirements

- Ph.D. in physics, chemistry, materials science or related fields
- Proven ability in theory development or in scientific software development
- Strong motivation to work in a collaborative environment.
- Excellent communication skills.
- Prior knowledge of many-electron theory or density-functional theory or warm dense matter is an advantage.
- Strong publication record is an advantage.

What we offer

- You will benefit from scientific excellence, broad national and international science networks
- You will be part of an international collaboration between two established institutions
- You will carry out a cutting-edge theoretical and computational research
- You will have the opportunity to master important and powerful computational methods and tools
- You will enjoy the nourishing environment of a young and vibrant research group

Fellowship

Successful candidates will be guided to apply to the Humboldt or Feodor Lynen or Marie Curie or to the Minerva postdoctoral fellowship for funding. Other funding sources are also possible and will be discussed with candidates on a personal basis.