Helmholtz Institute Jena (HI Jena)

The Helmholtz Institute Jena is an outstation of the GSI Helmholtz Center for Heavy Ion Research and is located on the campus of the Friedrich Schiller University (FSU) in the city of Jena. The HI Jena is part of the Helmholtz Association which is Germany's largest scientific organization, being mainly responsible for the development and operation of large-scale scientific infrastructure. Founded in 2009, the institute's research activities focus on the physics occurring at the border between conventional particle-acceleration technology and the fast-evolving field of laser-induced particle acceleration.

HI Jena is concerned with advancing these new laser-induced accelerator concepts, as well as with the production and investigation of intense photon and particle beams, including their interaction with matter. Accordingly, its work is focused on the development of high-power laser systems, novel laser-based accelerator concepts, X-ray spectroscopy, strong-field quantum electrodynamics and the physics of hot dense plasmas.

The Helmholtz Institute Jena comprehensively combines competence in accelerator, laser and X-ray technology contributed by the Helmholtz centers DESY, GSI and HZDR with expertise in the physics of high-power laser systems, laser-driven particle-acceleration, as well x-ray spectroscopy and polarimetry from the Friedrich-Schiller-University in Jena. The HI Jena will provide important contributions to future large-scale research-facilities currently being designed and built. Particular emphasis is devoted to the international heavy-ion and antiproton facility FAIR in Darmstadt, Germany and to the European XFEL in Hamburg, Germany .

More information

Research School of Advanced Photon Science (RS-APS)

Since 2012 the HI Jena has also its own graduate school, providing a structured education for the Phd students working at the institute. Currently, the RS-APS supports the studies of up to 25 Phd students working at Jena and/or the associated Helmholtz centers. In collaboration with the bodies of the FSU Jena and the Helmholtz Graduate School for Hadron and Ion Research (HGS-HIRe) the graduate school provides a structured doctoral program for its members.
Phd students that are supported by the CSC will be integrated in the RS-APS, giving them full access to the lectures, courses and study weeks provided by the graduate school and its partners. Moreover, in addition to the CSC stipend, the students will get approximately 400 Euro per month plus their own travel budget of 1000 Euro per year.

Friedrich-Schiller-University Jena (FSU Jena)

The University of Jena has a long tradition which dates back to the 16th century. Currently, about 20.000 students are enrolled at the various faculties and institutes of the FSU Jena. Phd students that are supported by the CSC will also be enrolled at the Faculty for Physics and Astronomy, which is renowned for its excellence in the fields of optics and photonics (going back to the seminal works of Ernst Abbe, Carl Zeiss and Otto Schott). The faculty has also a long-standing expertise both in the development of novel high-power laser systems and in precision spectroscopy of X-ray radiation.