HI JENA
HELMHOLTZ
Helmholtz Institute Jena

Jena, 10. June 2020

PhD position in high-field science

High-power laser technology (awarded with the Nobel Prize in 2018) has opened avenues towards investigating light-matter interactions at extreme field strengths and its applications as novel particle accelerators and hard photon sources. Moreover, in extremely intense laser fields one expects a strong coupling between collective plasma effects and strong-field QED processes, which require a non-perturbative description. In our newly established research group at the Helmholtz Institute Jena we investigate theoretically a wide range of topics related to strong-field QED and high-intensity plasma physics in close connection to upcoming experiments.

Job Description:

- Theoretical predictions for strong-field QED effects in high-intensity laser-matter interactions
- Development and application of state-of-the art numerical simulation codes
- Simulations of laser-plasma experiments
- Close collaboration with experimentalists working in the field

Qualifications:

- Very good degree in Physics or a related field
- Prior knowledge in plasma physics, high-intensity laser matter interaction, or quantum field theory is beneficial
- Programming skills and interest in computational physics
- Highly motivated to work in a diverse team with close connection to experiments
- Excellent communication skills in English, and preferably also in German

If you are interested in joining our group or have further questions please contact us.

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