

Several ERC-funded PhD and postdoc positions in asteroseismology in Heidelberg, Germany

The Theory and Observations of Stars ([TOS](#)) group at the Heidelberg Institute for Theoretical studies and at the Heidelberg University invites applications for PhD positions within the ERC-funded project DipolarSound.

Within the TOS group we are interested in understanding the physical processes that determine the structure and evolution of stars using asteroseismology – the study of the internal structures of stars through their global oscillations. The focus is on solar-like oscillators, i.e. low-mass main-sequence stars, subgiants and red-giant stars that possess oscillations similar to those present in the Sun.

The DipolarSound project funded by an ERC consolidator grant focusses specifically on the use of dipole modes in red-giant stars to infer the structure of these stars as well as differences in structures in red-giant stars with different oscillation patterns. This project involves the analysis of both observational data, as well as synthetic stellar models to understand what the observed phenomena mean in terms of the underlying structure of the stars. The focus will be on the analysis and interpretation of the mixed-dipole modes to investigate the conditions in the deep layers of these stars.

We are seeking highly motivated PhD students and Postdocs to join the DipolarSound project in the TOS group. Candidates for admission for the PhD program should have a MSc degree or equivalent in physics, astrophysics or a related discipline. Candidates at the post-doctoral level should possess a PhD degree or equivalent qualification in physics, astrophysics, math, computer science or a related discipline and preferably have experience in asteroseismology.

HITS offers a first-class research environment with outstanding computational resources and is embedded within the vibrant Heidelberg astronomical community that includes the Center for Astronomy of Heidelberg University and two Max Planck Institutes.

A generous research budget is available as well as a competitive salary and benefits package. For more information regarding working at HITS see [Working at HITS](#)

Applications need to be submitted by (15.04.2021) including:

- Cover letter with your motivation
- Curriculum Vitae
- Research Statement (max 2 pages, for Postdoc candidates only)
- Names and contact details of at least 2 people that can be contacted for recommendation letters

Please understand that we only accept applications that are submitted via the following application links:

Candidates PhD position: [PhD application](#)

Candidates post-doctoral position: [postdoc application](#)

The envisioned starting date is October 2021, negotiable. Initial review of applications will start on April 15, 2021 and may continue until the positions are filled.

Inquiries should be addressed to Prof.dr.ir. [Saskia Hekker](#)