12 Postdoc and PhD positions in the DFG Research Unit ‚Relativistic Jets in Active Galaxies'

We invite applications for 12 postdoctoral and doctoral student positions on theory, observations, modeling and simulations of relativistic jets in active galaxies. The successful applicants will be affiliated with one of the following member institutes of the research unit:

- Dr Karl Remeis Observatory, University of Erlangen-Nürnberg, Bamberg (FAU)
- Max-Planck-Institute for Radio Astronomy, Bonn (MPIfR)
- Hamburg Observatory, University of Hamburg, Hamburg (UHH)
- Landessternwarte Heidelberg-Königstuhl, Zentrum für Astronomie, Universität Heidelberg, Heidelberg (ZAH)
- Max-Planck-Institute for Astronomy, Heidelberg (MPA)
- Leibniz-Institute for Astrophysics, Potsdam (AIP)
- Inst. f. Theoretische Physik und Astrophysik, Julius-Maximilians-University Würzburg, Würzburg (JMU)

The preferred starting date is January 1, 2022. We are looking for highly qualified and highly motivated candidates with a MSc or equivalent degree in Physics or Astronomy (for PhD positions) or a doctoral degree, with interest to work on one of the following projects.

1) Jet Physics on event horizon scales and beyond using EHT and GMVA observations and GRMHD modeling (JMU, 2 positions in the groups of Christian Fromm and Matthias Kadler)
2) Development and application of relativistic reflection models for radio-loud AGN using X-ray spectroscopy (FAU; 1 position in the group of Jörn Wilms)
3) Studies of gamma-ray and MWL variability of Blazars using Fermi-LAT and HESS and time-dependent modeling of nonthermal AGN (JMU, ZAH; 2 positions in the groups of Sara Buson and Stefan Wagner)
4) mm-VLBI Studies of Gamma-Ray Bright Radio Galaxies with the GMVA and HSA (MPIfR; 1 position in the group of Biagina Boccardi)
5) Jet Composition under Scrutiny by GRMHD modeling and jet theory (JMU, MPA; 2 PhD in the groups of Christian Fendt and Karl Mannheim)
6) Large-Scale Blazar Jet Observations with LOFAR-VLBI (JMU; 2 positions in the group of Matthias Kadler)
7) Observations and Theory of jet feedback on groups and galaxy clusters using LOFAR surveys and numerical MHD modeling (UHH, AIP; 2 positions in the groups of Marcus Brüggen and Christoph Pfrommer)

Candidates should indicate in their cover letters which projects (or type of research: observational/theoretical) they would be interested in pursuing. Experience in the relevant field as well as programming in C, C++, Python (or any equivalent) is desirable. The required knowledge of the English language is level B1 of CEFR or above.
We value equality and diversity in research and encourage women and members of other underrepresented groups to apply. Preference will also be given to people with disabilities in case of equivalent qualification.
The process of hiring the selected candidates will be handled by the central administration of the respective hosting research institute or university. The salary will be based on the German federal public service salary scale (E13 TV-L; 66% for PhD positions, 100% for postdoc positions), amounting to a gross salary of approximately 2900-3050 EUR per month

(4400-4600 Eur per month for postdoc positions). Successful candidates will receive standard unemployment, health, and retirement benefits according to the German law.

Please send your application including a cover letter with a short summary of your general research interests and a ranked list of the projects you would like to apply for. Please add your preferred starting date, together with a CV, copies of the BSc, MSc diplomas, PhD certificate or equivalent (if applicable), and contact details of two potential referees. Postdoctoral candidates should also add a statement of research interests of up to 4 pages. Please send all information as a single PDF document in an E-mail to FOR5195-Applications@astro.uni-wuerzburg.de with the subject: "AGN Jets Application". Applications should be submitted by September 30, 2021.