Helmholtz-Zentrum Dresden-Rossendorf e.V.

Through cutting-edge research in the fields of ENERGY, HEALTH and MAT-TER, Helmholtz-Zentrum Dresden-Rossendorf (HZDR) solves some of the pressing societal and industrial challenges of our time. Join our 1,400 employees from more than 50 nations at one of our six research sites and help us moving research to the next level! The Center for Advanced Systems Understanding (CASUS) is a German-Polish research center for data-intensive digital systems research. CASUS was founded in 2019 in Görlitz and conducts digital interdisciplinary systems research in various fields such as earth systems research, systems biology and materials research. CASUS invites applications as

Postdoctoral Researcher (f/m/d) CASUS Topical study of the Large-Scale Structure of the Universe

The position will be available from 1 November 2022. The employment contract is limited to six months. The Scope of Your Job: Applicants (f/m/d) will be part of the CASUS research team for the topical study of the large-scale structure formation of the Universe under the supervision of Prof. Alexander Zhuk and will be working closely with the CASUS Professional Support Team.

City: Görlitz; Starting Date: 01/11/22; Renumeration: TVöD Bund; Reference number: 2022/149; Closing date: 15/09/22

Working field

- Development of equations and writing of the code for the N-body simulation of second-order perturbations for metric coefficients for the cosmic screening approach
- Analytical and numerical investigation of the influence of the vector potential on the results of N-body simulations of the power spectra within the cosmic screening approach
- Participation in the N-body simulations of the large-scale structure formation of the Universe

Requirements

- Excellent PhD degree in Theoretical Physics
- Excellent knowledge of physical cosmology, general relativity, and theory of cosmological perturbations
- Knowledge of calculating of the inhomogeneous gravitational field in cosmological systems of discrete particles
- Programming skills in languages such as C++ and Python or comparable languages
- Taken graduate-level courses on theoretical cosmology and computational methods in cosmology or astrophysics
- Strong motivation to work in a collaborative environment
- Excellent communication skills in English and in a professional context (presentation of results at meetings, colloquial discussions, writing of manuscripts)
What We Offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- The employment contract is limited to six months
- Salary and social benefits in accordance with the collective agreement for the public sector (TVöD-Bund) including 30 days of paid holiday leave, company pension scheme (VBL)
- We support a good work-life balance with the possibility of part-time employment and flexible working hours
- Numerous company health management offerings

Application
Kindly submit your completed application (including cover letter, CV, diplomas/transcripts, etc.) only via our Online-application-system: https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=66977

More information at https://stellenticket.de/150671/DDC/
Offer visible until 15/09/22