



The Excellence Cluster ORIGINS invites applications for two Postdoctoral Researchers

to pursue research in the **Origins Data Science Laboratory (ODSL)**. The excellence cluster 'ORIGINS: From the origins of the Universe to the first building blocks of life' (www.origins-cluster.de) started January 2019 and is funded within the framework of the Excellence Strategy of the German Research Foundation (DFG). The interdisciplinary research project is a cooperation of the Ludwig-Maximilians-Universität (LMU) and the Technische Universität München (TUM) as well as the Max Planck Institutes for astrophysics (MPA), extraterrestrial physics (MPE), physics (MPP), plasma physics (IPP), and biochemistry (MPIB), the European Southern Observatory (ESO) and the Leibniz computing center (LRZ). The Excellence Cluster ORIGINS will study the evolution of the cosmos – from the inception of the Universe to the first building blocks of life. Its goal is to show that life is the product of a natural process, a logical outcome of the evolution of the Universe – which can be understood based on the laws of physics and chemistry and the initial conditions created by the Big Bang.

The ODSL will provide a pillar for novel analysis methods, algorithms and computational tools to fully exploit high-dimensional, complex data sets. ODSL will develop advanced techniques for pattern recognition in noisy data and for the identification and extraction of weak signals. Modern techniques in machine learning will be employed as well as augmented reality and visualization techniques in the extraction of scientific results. The postdoctoral researchers will be expected to pursue independent research in a data science topic of their choosing as well as provide consulting help on research projects of ORIGINS. An equal amount of time should be spent on these two complementary research lines. Candidates are expected to have a background in particle, astroparticle or astrophysics and also have experience in data science topics. The successful candidates will be selected in part based on the independent data science projects they propose to pursue. Formal requirements for both positions are a PhD in physics or astrophysics.

Salary and benefits are commensurate with the pay scale of public service organizations (TVöD). The contract is initially limited to 3 years with the possibility of an extension.

The advancement of women in the sciences, especially in all areas of physics, is integral to the policy of the Excellence Cluster ORIGINS. We therefore especially encourage applications from women. Disabled persons will be given preference to other equally qualified applicants.

Further information can be obtained from Prof. Allen Caldwell (EMail: caldwell@mpp.mpg.de) and from the ORIGINS webpage (<http://www.origins-cluster.de>). The deadline for applications is April 30, 2019, but we will continue to receive and consider applications until the positions are filled. Interested applicants should submit an application letter, a statement of research interests, a curriculum vitae, a list of publications, and arrange for three letters of support. Applications should be sent as a single PDF to job@origins-cluster.de. Support letters should also be sent to job@origins-cluster.de and specify ODSL in the file name.