

ORIGINS Research Fellow (m/f/d) in Astrophysics,
Cosmology, Nuclear, Particle Physics or Biophysics



The Excellence Cluster 'ORIGINS: From the Origins of the Universe to the First Building Blocks of Life' 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 supercomputing center (LRZ). The Excellence Cluster ORIGINS studies the evolution of the cosmos – from the inception of the Universe to the first building blocks of life in an interdisciplinary manner combining astro-, particle and biophysics. Our aim is to show that life is a natural consequence of the evolution of the Universe – and thus can be understood based on the fundamental laws of physics and chemistry and the initial conditions created by the Big Bang.

As part of our **ORIGINS FELLOWSHIP PROGRAM** we are looking for a recent (within 5 years of receipt of their PhD), highly qualified PhD graduate. The fellow will have the opportunity to work independently and should pursue an interdisciplinary research program in any research area of the ORIGINS Cluster (theoretical or experimental), which directly connects to the ORIGINS "Connectors" (see <https://www.origins-cluster.de/en/research-1/overview>). Collaboration with our infrastructures ODSL, C2PAP and IDSL is welcome. (See <https://www.origins-cluster.de/en/infrastructure>).

We offer a full-time position on the Garching/Munich science campus starting at the earliest possible date. Salary and benefits are commensurate with the pay scale of public service organizations (TV-L E14). Fellowship appointments will be for a 3-year term and come with a travel budget of EUR 5.000/year. 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.

Application: Candidates should send a cover letter, a complete curriculum vitae including a list of publications, a brief statement of research accomplishments and a future research plan for the full 3-year appointment (giving reference to the "Connectors" and infrastructures that they would like to collaborate with), and arrange for 3 letters of recommendation to be sent to job@origins-cluster.de. The application deadline is Dec. 14, 2020. More information about the ORIGINS Excellence Cluster can be found on the webpage: <https://www.origins-cluster.de>. **Contact:** Dr. Alice M. Smith-Gicklhorn, alice.smith-gicklhorn@origins-cluster.de – Excellence Cluster ORIGINS, Boltzmannstraße 2 – 85748 Garching – Germany, Tel. +49 (0)89 35831 7104

ORIGINS Vera Rubin Fellow in Astrophysics,
Cosmology, Nuclear, Particle Physics or Biophysics



The Excellence Cluster 'ORIGINS: From the Origins of the Universe to the First Building Blocks of Life' 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 supercomputing 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 in an interdisciplinary manner combining astro-, particle and biophysics. Our aim is to show that life is a natural consequence of the evolution of the Universe – and thus can be understood based on the fundamental laws of physics and chemistry and the initial conditions created by the Big Bang.

The advancement of women in the sciences, especially in all areas of physics, is integral to the policy of the Excellence Cluster ORIGINS. As part of our **ORIGINS VERA RUBIN FELLOWSHIP PROGRAM** we are looking for a recent (within 5 years of receipt of their PhD), highly qualified, **female** PhD graduate. The Vera Rubin fellow will have the opportunity to work independently and potentially pursue an interdisciplinary research program in any research area of the ORIGINS Cluster (theoretical or experimental). Fellowship appointments will be for a 3-year term and come with a travel budget of EUR 5.000/year.

We offer a full-time position at the Munich/Garching campus starting at the earliest possible date. Salary and benefits are commensurate with the pay scale of public service organizations (TV-L E14). Disabled persons will be given preference to other equally qualified applicants.

Application: Candidates should send a cover letter, a complete curriculum vitae including a list of publications, a brief statement of research accomplishments and a future research plan for the full 3-year appointment, and arrange for 3 letters of recommendation to be sent to job@origins-cluster.de. The application deadline is Dec. 14, 2020. More information about the ORIGINS Excellence Cluster can be found on the webpage: <https://www.origins-cluster.de>.

Contact: Dr. Alice M. Smith-Gicklhorn, alice.smith-gicklhorn@origins-cluster.de – Excellence Cluster ORIGINS, Boltzmannstraße 2 – 85748 Garching - Germany, Tel. +49 (0)89 35831 7104

The Excellence Cluster ORIGINS
invites applications for a
Postdoctoral Researcher (m/f/d)



to pursue research within 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 supercomputing centre (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 <https://www.origins-cluster.de/en/infrastructure/odsl>.

We plan to establish the **Dark Matter Data Centre (DMDC)**, thoroughly integrated into the ODSL, as a platform to host and combine overarching information on experimental studies, astronomical observations and theoretical modelling of dark matter to facilitate the combination and cross-correlation of existing and forthcoming data.

Your tasks:

The postdoctoral researcher is expected to:

- create and maintain a database of current dark matter searches, collect public results and data releases;
- pursue independent research to exploit the complementarity of different experiments and approaches;
- contribute to establishing a standard set of assumptions and statistics tools for the interpretation of data.

The successful candidate will be fully embedded in the ODSL team and will benefit from the stimulating environment of the excellence cluster ORIGINS that involves

people working on cosmology, astro- and particle physics, both in experiments and in theory.

Your profile:

Applicants are expected to have a solid background in dark matter, particle and/or astroparticle physics, with the strong interest to work at the intersection between theory, phenomenology and experiment and good knowledge in computation and statistical inference. The formal requirement for the position is a PhD in physics or astrophysics.

Our offer:

We offer a full-time position at the Technische Universität München (TUM) starting at the earliest possible date. Salary and benefits are commensurate with the pay scale of public service organizations (TV-L E13). The contract is initially limited to 2 years with the possibility of an extension for up to 4 years.

Your application:

The **deadline for applications is December 14th 2020**, but we will continue to receive and consider applications until the position is 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-DMDC in the file name.

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.

Contact:

Further information can be obtained from Prof. Allen Caldwell (e-mail: caldwell@mpp.mpg.de), Prof. Stefan Schönert (e-mail: schoenert@ph.tum.de) and Dr. Federica Petricca (e-mail: petricca@mpp.mpg.de).

Hinweis zum Datenschutz:

Im Rahmen Ihrer Bewerbung um eine Stelle an der Technischen Universität München (TUM) übermitteln Sie personenbezogene Daten. Beachten Sie bitte hierzu unsere [Datenschutzhinweise gemäß Art. 13 Datenschutz-Grundverordnung \(DSGVO\) zur Erhebung und Verarbeitung von personenbezogenen Daten im Rahmen Ihrer Bewerbung](#). Durch die Übermittlung Ihrer Bewerbung bestätigen Sie, dass Sie die Datenschutzhinweise der TUM zur Kenntnis genommen haben.