

## Goals and Strategy of TUM-IAS

The central goal of the Institute for Advanced Study of Technische Universität München (TUM-IAS) is to establish new fields of excellence in scientific and technological research at TUM.

In particular, TUM-IAS has a special interest in innovative, “high-risk, high-reward” topics. It aims at creating an optimal research environment at TUM in which new ideas can flourish without being hindered by administrative burdens.

TUM-IAS’ strategy as an Integrative Research Center is to enable not only selected guest scientists (from both academia and industry) but also our best faculty members to conduct top-level research, while offering early-career scientists the chance to develop their talents in an inspiring environment fostered by outstanding senior scientists. To this end, Fellows at different career stages are given the possibility to devote their time to innovative research projects in nascent areas of science that promise major scientific breakthroughs.



IAS

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# Risking Creativity

Institute for Advanced Study  
Technical University of Munich

**Interdisciplinary**  
Worldwide scientific network  
Industry connection  
**Talent pool International**  
Free of administrative burdens  
**Intellectual Center**

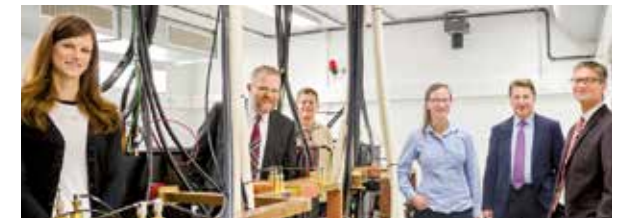
Photos: Eckert/Heddergott, TUM

## Research Areas

TUM-IAS is Fellow-driven, not thematically driven. However, big themes emerge dynamically and are further developed over time. The Research Areas embedded into TUM-IAS therefore cover a wide range of innovative, interdisciplinary fields. TUM-IAS initiates this by motivating TUM groups to submit Fellowship proposals and constitute Focus Groups, which are the basic units of organization at TUM-IAS. While the Fellowships can only last for a limited period of time, it is their purpose to provide substantial scientific leadership towards the creation of new research areas at TUM, and establish sustainable, long-term research collaborations that are embedded in the TUM faculties.

Currently, the TUM-IAS Focus Groups work in the following nine Research Areas:

- Advanced Computation and Modeling
- Bio-Engineering and Imaging
- Communication and Information
- Control Theory, Systems Engineering and Robotics
- Environmental and Earth Sciences, Building Technology
- Fundamental Natural and Life Sciences
- Gender and Diversity in Science and Engineering
- Medical Natural Sciences
- Surface, Interface, Nano- and Quantum Science



## Funding

### Excellence Initiative

TUM-IAS was established as a flagship of TUM's institutional strategy to promote top-level research in the Excellence Initiative of the German federal and state governments. TUM was successful in both rounds (2006 and 2012) of this nationwide competition, and was thus officially named one of Germany's few "elite" universities.

### Marie Curie COFUND Program

Since 2012, TUM-IAS has been one of the projects co-funded by the European Union's Marie Curie COFUND program, which aims at nurturing excellence through cross-border and cross-sector mobility. The program's strong focus on transnational mobility leads to a "mobility requirement" which all Fellows funded by COFUND must fulfill: In the three years leading up to the respective call for applications, candidates must not have been employed in Germany for more than 12 months. At TUM-IAS, this applies to the Hans Fischer and Rudolf Diesel Industry Fellowships as well as the Rudolf Mößbauer Tenure Track Professorships (appointments 2013–17).

### Hans Fischer Senior Fellowship awarded by the TÜV Süd Foundation

In 2015 the TÜV Süd Foundation and TUM agreed on introducing a "Hans Fischer Senior Fellowship awarded by the TÜV Süd Foundation". By funding this fellowship the TÜV Süd Foundation aims to support the exchange of internationally renowned scientists as well as sustainable projects in ground-breaking research fields.

## TUM-IAS Fellowships

### Carl von Linde Senior Fellowship

Outstanding, active TUM faculty members with a distinguished track record in research

- 3-year Fellowship
- substitute professorship
- up to €50,000 for research-related costs

### Hans Fischer Fellowship \*

Outstanding early-career scientists from outside TUM (max. 12 years after doctorate)

- 3-year Fellowship (with a planned residence at TUM of ca. 9 months within this period)
- award of €30,000; €50,000 for travel, housing, and research-related costs
- support for a doctoral candidate
- tandem application: 2 nominations per host, at least one of them for a female scientist

### Hans Fischer Senior Fellowship \*

Outstanding senior scientists from outside TUM

- 3-year Fellowship (with a planned residence at TUM of ca. 9 months within this period)
- award of €60,000; €50,000 for travel, housing, and research-related costs
- support for a doctoral candidate
- tandem application: 2 nominations per host, at least one of them for a female scientist



### Rudolf Mößbauer Tenure Track Professorship

Outstanding early-career scholars who have the ambition of developing a new field of endeavor upon joining TUM

- 6-year Fellowship in the position of Tenure Track Assistant Professor (salary according to the W pay scale, initially W2)
- academic career options: from a permanent position as Associate Professor on to Full Professor
- funding for a research assistant (TV-L E 13)
- €150,000 expense account for research support

### Rudolf Diesel Industry Fellowship \*

Highly qualified researchers from industry, especially from outside Germany

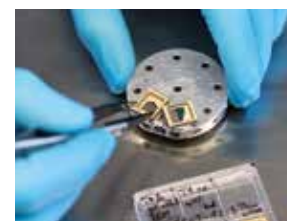
- 3-year Fellowship
- research fund, flexible, depending on the specific needs of the project

### Anna Boyksen Fellowship \*

Outstanding scientists from outside TUM who intend to explore gender- and diversity-relevant themes in the context of the TUM subject portfolio

- 2-year Fellowship (with a planned residence at TUM of 3-6 months within this period)
- award of max. €20,000
- max. €50,000 for travel, housing and research-related costs (depending on length of stay)

\*Joint application with a TUM professor who would serve as host.



## TUM-IAS Headquarters in Garching



The TUM-IAS building, located in the heart of the university's research campus in Garching, was donated and built by the BMW Group. TUM alumni Rüdiger Leo Fritsch and Aslan Tschaidse were responsible for the architectural design.

The building provides not only office space for the Fellows and the TUM-IAS management, it is also perfectly equipped for high-class scientific events. With an auditorium, a faculty club, and meeting rooms in various sizes, the building hosts large conferences as well as small symposia. TUM-IAS organizes a variety of events each year, such as exploratory workshops, monthly Fellows' Lunches, summer schools, and public lecture series, all to support the establishment of new fields of excellence in technological research at TUM. The TUM-IAS building serves as an intellectual center of the research campus in Garching.

