

## Press Release

Munich, 15 June 2012

### **Institutional Strategy, Graduate School and Research Clusters: TUM retains its title of University of Excellence**

**Technische Universität München (TUM) has retained its “University of Excellence” title. Today, TUM’s institutional strategy was approved with its Tenure Track career system for young scientists – the first of its kind in Germany. In addition, TUM plans to intensify cutting-edge research at its interdisciplinary Integrative Research Centers. It is setting up new centers for research into diversity and the social impact of technology (Munich Center for Technology in Society). TUM was also commended for its International Graduate School of Science and Engineering (IGSSE) and four Clusters of Excellence in collaboration with LMU Munich. At least € 165 million in funding is to be awarded to TUM between 2012 and 2017.**

For the second time, the German Council of Science and Humanities and the German Research Foundation have named TUM a University of Excellence. The key deciding factor for the nomination was TUM’s institutional strategy – centered on fostering an entrepreneurial approach to attract and promote a diversity of talents and on promoting interdisciplinary research to tackle the main challenges facing the world and actively engage with society.

“This latest success is a triumph for Munich as a hub of scientific excellence. We are delighted that its two main universities, TUM and LMU, have established themselves as world-class centers of research,” remarked TUM President Wolfgang A. Herrmann. “The resounding vote in our favor from experts around the world encourages us to continue on our pioneering modernization path as we transition to a scientific, entrepreneurial and international university.” According to Herrmann, TUM’s deep roots in Munich – one of Europe’s most vibrant metropolitan areas – are just as important as gaining a foothold in parts of the world “which will be setting the pace in years to come.” He continues, “We believe that the key to competitiveness lies in forging a strong university community with its own identity – something we have already achieved at TUM.”

#### **The institutional strategy: TUM.The Entrepreneurial University**

##### **TUM Faculty Tenure Track**

TUM’s new end-to-end career system represents a paradigm shift in the German higher education sector. It sets out a clear path for talented young academics with international experience. Within six years they can progress from assistant professor (W2) to associate professor (W3), and subsequently attain the position of full professor. To move up the ladder, they have to negotiate a competitive evaluation system and meet strict quality criteria. By the year 2020, TUM intends to create 100 new professorships. A joint appointment process gives young researchers from the Max Planck Society the chance to become professors at TUM (MaxPlanck@TUM). This tenure concept is flanked by a number of complementary recruitment measures, ranging from professional headhunting techniques to the “Munich Welcome!” network, which helps the families of newly arrived academics settle in to their new surroundings.

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## Integrative Research Centers

The global challenges facing society, such as the rising need for energy and food, call for solutions that extend beyond the reach of any single discipline. The range of subjects offered by TUM is unparalleled, making it the ideal environment for interdisciplinary research. Scientists from TUM's 13 academic departments work side by side in Integrative Research Centers. With the exception of the TUM Institute for Advanced Study, these centers offer their own Master's courses and have the right to award doctorates.

- The **Munich Center for Technology in Society (MCTS)** adds a new dimension to research at TUM. Sociologists, ethics experts, philosophers, historians, political scientists, economists and media scholars team up with engineers and natural scientists. MCTS explores how technology affects society and vice-versa. It also engages with the public and policy makers.
- The **Anna Boyksen Diversity Research Center** explores human diversity and the opportunities of diversity for society. Its work focuses on a question often overlooked in Germany: How can the natural, engineering and life sciences benefit from a more diverse community culture?
- Established in 2010, the **Munich School of Engineering (MSE)** is a hub for clean technologies. It coordinates TUM•Energy – TUM's main research focus. Here, scientists from practically every academic department try to find solutions for sustainable energy supplies and mobility options. MSE plays an enabling role in accelerating the transfer of the latest scientific research findings to engineering applications. Highly qualified doctoral students from the universities of applied sciences in Rosenheim, Munich, Weihenstephan, Deggendorf and Ingolstadt are involved in this initiative.
- The **TUM Institute for Advanced Study (TUM-IAS)** was at the heart of TUM's first institutional strategy in 2006. It is continuously being expanded. TUM-IAS gives elite scientists from academia and industry the freedom to realize visionary ideas in exciting new fields of research over several years. The BMW Group has funded a new building for this institute in Garching.

## The TUM community

TUM fosters a work and study environment that allows every individual to realize their full potential. The new Vice President of Diversity & Talent Management office anchors diversity awareness in all aspects of university life. TUM's "Munich Welcome!" network is the first initiative of its kind in Germany, bringing together scientific institutes and companies to help newly arrived academics find their feet in Munich and its environs. Meanwhile, the TUM.Family concept encourages every generation to engage with research and teaching, from high school students to alumni. The TUM Emeriti of Excellence are involved in practically every Excellence Initiative project.

## TUM.Global

TUM would like to expand its international presence. Complementing its locations in Singapore, Beijing, Mumbai and São Paulo, it is set to open new offices in Brussels, Cairo, Boston and Tokyo. The aim is not only to recruit the best scientists and students, but also to strengthen alliances with universities, companies and funding organizations while expanding TUM's alumni network. The Brussels office will represent the interests of the EuroTech University Alliance, where TUM joins forces with universities from Eindhoven, Copenhagen and Lausanne.

### **Graduate Schools**

TUM's Graduate Schools provide a structured academic environment for doctoral candidates. There is a strong focus on interdisciplinary research projects and qualifications. The TUM Graduate School is the umbrella organization for the university's graduate centers. It is funded to the tune of three to four million euros every year.

### **International Graduate School of Science and Engineering (IGSSE)**

The International Graduate School of Science and Engineering (IGSSE) was set up in 2006 to bring natural and engineering science doctoral candidates together for joint research projects. Since then, the concept has been developed further: Project teams are synergized into focus areas to explore interdisciplinary research fields in greater depth – for example water management or the application of biological principles to technology (bionics).

### **Clusters of Excellence**

Scientists from a variety of disciplines and different institutes carry out overarching interdisciplinary research in the Clusters of Excellence. TUM is the host university for four clusters, which are run in conjunction with LMU Munich.

The following Cluster of Excellence is **new** to Munich (host universities in brackets):

#### **Munich Cluster for Systems Neurology – SyNergy (LMU & TUM)**

Systems neurology is a new field of science that seeks to explain the mechanisms behind the development of neurological disorders. The scientists involved in SyNergy will investigate how inflammatory reactions affect neurodegenerative processes, how microvascular and degenerative damage mechanisms influence each other, and how immune cells interact with the blood-brain barrier.

The following Clusters of Excellence will be **continued**:

#### **Origin and Structure of the Universe (TUM & LMU)**

The origin and structure of the universe in terms of matter, space and time, and the nature of fundamental forces form the basis of research at the Origin and Structure of the Universe cluster. The Computational Center for Particle and Astrophysics (C<sup>2</sup>PAP) is being set up in cooperation with the Leibniz Supercomputing Center to process this cluster's data.

#### **Munich-Centre for Advanced Photonics – MAP (LMU & TUM)**

The MAP Cluster of Excellence focuses on new coherent light sources and laser-driven particle sources with unique properties. These open up new possibilities in physics, chemistry, biology and medical applications. A new facility called the Center for Advanced Laser Applications (CALA) is currently being built in Garching. The German Research Foundation has allocated €64 million in funding for this joint LMU/TUM project independently of the Excellence Initiative.

#### **Nanosystems Initiative Munich – NIM (LMU, TUM & University of Augsburg)**

The goal of the NIM cluster is to design, fabricate and control multi-functional nanosystems for applications in information technology, energy conversion and medical technologies. The integration of such nanosystems into real environments will be a key future focus of research.

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**Center for Integrated Protein Science Munich – CIPSM (LMU)**

Researchers at the CIPSM have been studying the properties of proteins using methods drawn from genetics, (bio)chemistry and (bio)physics since 2006. Going forward, extra emphasis will be placed on the interactions of proteins within their networks and potential therapeutic applications. LMU is the host university with TUM continuing to play an enabling role.

**Further information:**

[www.exzellenz.tum.de](http://www.exzellenz.tum.de)

**TUM researchers explain their projects:**

<http://www.youtube.com/TUMuenchen1>

**Download images:**

<http://mediatum.ub.tum.de/?id=1108545>

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