

TUM Emeriti of Excellence





TUM campus, city center

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Foreword from the President



“Verachtet mir die Meister nicht!” – Do not spurn the masters!

One of Richard Wagner’s Mastersingers of Nuremberg, Hans Sachs, a “master shoemaker and poet as well”, uses this warning to point to the professional and social function of the role models that his fellow guild members represent. And what goes for our honored arts and crafts is in no way an alien concept to academia. In various ways, professors need to function as role models for the next academic generation. They should excel professionally and be academically original, engage with an international network, act as a sympathetic superior to their colleagues, and be personalities to whom their students can look up and aspire. All in all, this is a great deal to ask. But they nevertheless exist: these great, timeless figures of academia who work within and with their era – no matter how much they are subject to constantly changing demands. Technische Universität München (TUM) is bold enough to choose from its extensive circle of dedicated emeriti those who, even after the end of a successful academic career, continue to serve their alma mater and wish to place their respective strengths at its disposal. Teaching, research, networking, project initiatives and mentoring are all typical examples of the active commitment of our TUM Emeriti of Excellence.

They have become potent ambassadors for the university of today. They represent a combination of excellence, lifetime experience and character. The idea of integrating the TUM Emeriti of Excellence into the daily operation of our university increasingly impressed itself upon me over the years in which I often had to present a “retirement diploma” to hard-working, laudable faculty members.

More and more, their retirement seemed to me to be a great waste of talent and a loss to our family atmosphere: excellent professors stepping down from academia – to which they had donated a considerable part of their life with enthusiasm and dedication – according to a fixed date determined by their age. A professor’s job is not a cash cow but a vocation. Ongoing engagement with talented, curious young people who find joy in discovery is rejuvenating, and this is evident in our professors. In the US, they have the Age Discrimination in Employment

Act. Professors teach as long as their students are satisfied with them; in the standard phrase, they are there “at the pleasure of the students”. Which is as it should be because, with their extensive educational experience, teachers can recognize what is essential, go on journeys of the mind, arrive at conclusions and avoid getting lost in detail. These individual professors are models in the best manner of speaking – a realization that should ultimately come to university education policy in the federal states of Germany as well.

In TUM Emeriti of Excellence, several criteria come together. We have leading lights of international science; long-standing, superb achievement in academic education; a particular commitment beyond the boundary of individual departments to the university as a whole; and readiness for active cooperation with TUM’s development – in particular, the practical realization and advancement of the Excellence Initiative.

This commitment encompasses, for example, acting as the President’s representative for partner schools and the “Paths of Experience in Research” mentoring program; the realization of the bionic initiative and the TUM Institute for Advanced Study; ongoing, concurrent activity as political consultants in Berlin and Brussels and the construction of the International Center of the Bavarian Building Industry for TUM. On the international stage, our TUM Emeriti of Excellence present themselves as skilled experts and are able to make vital contacts. With their respective individual strengths, they contribute to university development – whether in teaching and research or in network-building, internationalization and structural improvement or in the many different projects within the Excellence Initiative in 2006 and 2012. The TUM Emeriti of Excellence spokesperson is a standing member of the TUM Extended Board of Management, and this is also a mark of respect from the entire university. Our Emeriti are also trusted participants as rapporteurs in numerous appeal procedures at TUM. TUM Emeriti of Excellence have thus become active ambassadors for our university at home and abroad.

In the name of my alma mater, I’d like to thank these emeriti for championing our future over and above the call of duty, for setting their own interests aside and, at the same time, bringing in their personal experience and a certain critical distance to the mix. They deserve our full respect. We at TUM do not spurn our masters.

Munich · Garching · Weihenstephan, January 2016

Wolfgang A. Herrmann
President



TUM Institute of Advanced Study (TUM-IAS), Campus Garching

Since 2007, the Technical University of Munich has awarded selected retired scientists the honorary title of “TUM Emeriti of Excellence” (EoE), and has actively involved them in university life. The knowledge and networks of experienced professors should remain accessible, and can be used to support the interests and aims of the university. At the project's inception, 26 scientists were included in the interdisciplinary group, which now numbers 56 professors; all faculties are represented apart from the still relatively newly founded TUM School of Education and the Department of Sport and Health Sciences, which is currently in the development phase. The TUM Emeriti of Excellence receive the necessary support for their honorary work from the university (e.g., the reimbursement of travel expenses). Requests for EoEs to carry out assignments are made both by the university administration, as well as from central service centers (such as the TUM International Center) and from centers dealing with the promotion of young talent (such as the TUM Young Academy and TUM Talent Factory). These colleagues have played a significant role in the development of the TUM Codes of Conduct.



In addition to their knowledge and experience, the professors are above all distinguished by their independence – their personal interests, or those of faculty play a minor role in their activities. Their judgment can, amongst other things, be usefully deployed for all processes in which candidates have to be evaluated in competitive procedures. Thus, each semester, in the context of support programs for guest researchers and postdocs, 13 Emeriti sift and assess more than 350 applications from all over the world, and choose the best candidates for the TUM. Further important activities are presented on pages 12-13 of this brochure.

Professors and university administrators regularly meet at the TUM Institute for Advanced Study (TUM-IAS) to discuss specific topics related to the development of the university. The scientists elect one of their number to be a spokesperson, and one to be an acting representative who functions as a contact person for the university administration. The renowned professor of engineering science, Prof. Dr.-Ing. Georg Fäber, held the office of spokesperson up until June 2015, as well as holding the highly responsible position of TUM ombudsman since 2011. Prof. Dr. Dr. h.c. mult. Karl-Heinz Hoffmann, president of the Bavarian Academy for Sciences is his successor. Since June 2015, Prof. Dr.-Ing. Jörg Eberspächer, whose name is well known in relation to international research in the field of telecommunication networks, has been acting spokesperson since June 2015. Since 2007, the TUM Emeriti of Excellence project office has been represented by Erika Schropp, with the able assistance of Dr. Birgit Herbst-Gaebel since 2015.

Munich, January 2016

Prof. Dr. Michael Molls
Spokesperson for TUM Emeriti of Excellence

The TUM Emeriti of Excellence Project



EoE Members Meeting in IAS, 06.16.2015

The TUM Emeriti of Excellence (EoE) project has enabled the TUM to implement a facet of its modern diversity concept: Adding value by valuing all age groups. Young talent and innovation are of vital importance to the university. At the same time, increasing life expectancy and productivity makes it possible for professors who are officially in retirement to be “kept on board”. Bypassing inflexible regulations relating to age, this project serves to further develop the university by harnessing the knowledge and experience of these professors, who in turn feel that they are still closely connected with their alma mater across generational boundaries.

The TUM Emeriti of Excellence are volunteers, and are especially active in the areas of organization, coordination, and the representation of science.

Currently, the main points of focus of the 56 TUM Emeriti of Excellence are:

- Membership of scientific committees and advisory boards, apart from appointment committees (10)
- Rapporteurs in appointment committees (25)
- Internationalization and maintenance of networks (38)
- Supporting young researchers (21)

The TUM Emeriti of Excellence have already been integrated into the following fields (cf. diagram on pages 12-13):

Scientific advisory boards and committees e.g.,

- TUM-IAS Board of Trustees
- TUM-IAS Advisory Council
- TUM Appointment and Tenure Board
- TUM: Young Academy Advisory Board
- TUM Leonardo da Vinci Centre for Bionics
- Scientific Advisory Board Munich Aerospace

Internationalization e.g.,

- Student selection procedure Peking
- Appointment of TUM alumni and TUM ambassadors
- Representation of the TUM at conferences and events
- Representing of the President in academic conferences abroad.

Supporting young talent e.g.,

- TUM Youth Conference
- TUM: Young Academy
- Research Opportunities Week (ROW)
- TUM University Foundation Fellowship (TUFF)
- TUM IdeAward

Special functions e.g.,

- TUM Ombudsman
- CEO TUM CREATE

Several TUM Emeriti of Excellence are engaged in securing financial support to the new University Foundation (created 2010).



EoE Working Group on Interdisciplinary Research in Medicine 2013

The TUM Emeriti of Excellence Project

As an interdisciplinary team boasting experience gathered over numerous decades, the TUM Emeriti of Excellence creates position papers on strategically important topics.

They support a modern university administration, whose need for advisory assistance is ever expanding due to the increasing diversity of tasks it has to deal with.

The TUM Emeriti of Excellence take personal responsibility for initiatives and pilot projects, and a considerable amount of their time is spent dealing with university issues. All told, their work constitutes several hundred voluntary days work per year in the area of scientific management.



IAS Faculty Day 2015



EoE Lecture Series "Research Highlights": Lecture by Prof. Radig and Prof. Beck on 06.13.2015



TUM-IAS Annual General Meeting 2014, EoE Board of Trustees and Advisory Council

In particular, they help carry the work burden of the young professorate, who are under particular strain due to ever increasing pressure of international competition, as well as trying to develop their careers and start families at the same time. In close cooperation with their former faculties, the TUM Emeriti of Excellence remain active in teaching and third-party-funded research, as well as mentoring students completing diploma and postgraduate degrees.

The nature and extent of the project is unique within the academic landscape in Germany. It relies on the knowledge and experience of outstanding leading researchers, who are integrated into diverse areas of the university beyond the boundaries of their own subjects. In 2012, the project was awarded the status of model project by the EU in the context of the initiative "Europäische Jahr für aktives Altern und Solidarität zwischen den Generationen". In 2014 it was nominated for the "Deutschen Engagement-Preis" prize. The project is a part of the future concept "TUM. The Entrepreneurial University" in the context of the excellence initiative of the federal and state governments (2006/2012).

www.emeriti-of-excellence.tum.de

TUM Emeriti of Excellence Project Development

Project Start Date 2006

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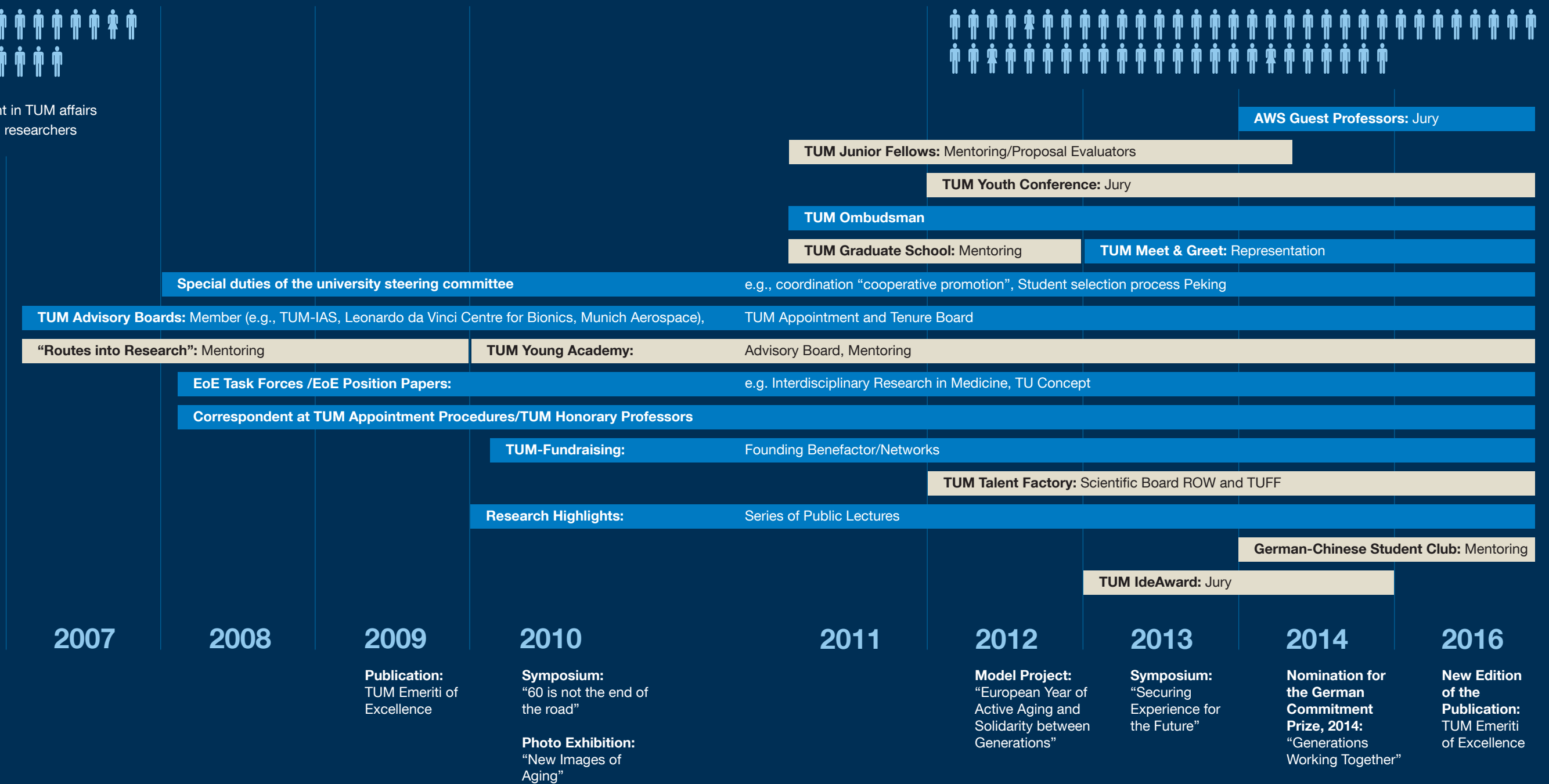


2015

56 Emeriti of Excellence



- Active Involvement in TUM affairs
- Supporting young researchers



TUM Emeriti of Excellence 2007-2015



Prof. Dr. Gerhard Abstreiter

Former Professor of Experimental Semiconductor Physics and Director of the Walter Schottky Institute as well as the Institute for Advanced Study
TUM Department of Physics



Prof. Dr.-Ing. Kurt Antreich

Former professor of electronic design automation
TUM Department of Electrical and Computer Engineering



Prof. Dr. med. Edgar Biemer

Former professor of plastic, reconstructive and cosmetic surgery
TUM School of Medicine



Prof. Dr. phil. Dr.-Ing. E.h. Dr.-Ing. h.c. Adolf Birkhofer

Former professor of nuclear reactor dynamics and safety
TUM Department of Electrical and Computer Engineering



Prof. Dr. Dr. h.c. Manfred Broy

Former Professor of Software & Systems Engineering
TUM Department of Informatics



Prof. Dr. Andrzej J. Buras

Former professor of theoretical elementary particle physics
TUM Department of Physics



Prof. Dr. med. Dr. h.c. mult. Meinhard Classen

Former professor of internal medicine
TUM School of Medicine



Prof. Dr.-Ing. Jörg Eberspächer

Former professor of communication networks
TUM Department of Electrical and Computer Engineering



Prof. Dr.-Ing. Georg Färber

Former professor of real-time computing (RTC)
TUM Department of Electrical and Computer Engineering



Prof. Dr. rer. nat. Sighart Fischer

Former chair of theoretical physics
TUM Department of Physics



Prof. Dr. med. Dr. h.c. Paul Gerhardt

Former professor of diagnostic radiology
TUM School of Medicine



Prof. Dr. rer. nat. Dr.-Ing. habil. Angelika Görg

Professor of proteomics
TUM School of Life Sciences Weihenstephan



Prof. Dr. rer. nat. Wolfgang Götz

Former chair of theoretical physics
TUM Department of Physics



Prof. Dr. med. Reiner Gradinger

Former Professor of Orthopedics and Trauma Surgery, former Medical Director of the University hospital Klinikum rechts der Isar
TUM School of Medicine



Prof. Dr.-Ing. Harry Grundmann

Former professor of structural mechanics
TUM Department of Civil, Geo and Environmental Engineering



Prof. Dr.-Ing. Dr.-Ing. E.h. Joachim Hagenauer

Former professor of communications engineering
TUM Department of Electrical and Computer Engineering



Prof. Dr.-Ing. Dr.-Ing. E.h. Joachim Heinzl

Former professor of microfabrication technology and microtechnology
TUM Department of Mechanical Engineering



Prof. Dr. (Univ. Rom) Dr. h.c. Dipl.-Ing. Thomas Herzog

Former professor of structural technology
TUM Department of Architecture



Prof. Dr. rer. nat. Bertold Hock

Former professor of cell biology
TUM School of Life Sciences Weihenstephan



Prof. Dr. med Heinz Höfler

Director of the Institute for Pathology and Pathological Anatomy, TUM und the Institute for Pathology, Helmholtz-Zentrum Neuherberg
TUM School of Medicine



Prof. Dr.-Ing. Bernd-Robert Höhn

Former professor of mechanism design
TUM Department of Mechanical Engineering



Prof. Dr.-Ing. Hartmut Hoffmann

Former professor of forming and casting technology
TUM Department of Mechanical Engineering



Prof. Dr. rer. nat. Dr. h.c. mult. Karl-Heinz Hoffmann

Former professor of applied mathematics
TUM Department of Mathematics



Prof. Dr. med. Franz Hofmann

Former professor of pharmacology and toxicology
TUM School of Medicine



Prof. Dr. rer. nat. Dr. h.c. mult. Robert Huber

Director Emeritus at the Max-Planck-Institute for Biochemistry
Former Professor of Chemistry
TUM Department of Chemistry



Prof. Dr.-Ing. Dr. h.c. mult. Günter Kappler

Former professor of propulsion and director of the Institute of Aeronautical and Astronautical Engineering
TUM Department of Mechanical Engineering



Prof. Dr. rer. nat. Dr. h.c. Horst Kessler

Former professor of organic chemistry and biochemistry
TUM Department of Chemistry



Prof. Dr. rer. nat. Manfred Kleber

Former professor of theoretical physics
TUM Department of Physics



Prof. Dipl.-Ing. Peter Latz

Former professor of landscape architecture and planning
TUM Department of Architecture



Prof. Assessor Dr.-Ing. Dipl.-Ing. Holger Magel

Former professor of land management and development
TUM Department of Civil, Geo and Environmental Engineering



Prof. Dr.-Ing. Dr.-Ing. E.h. mult. Franz Mayinger

Former professor of thermodynamics
TUM Department of Mechanical Engineering

TUM Emeriti of Excellence 2007-2015



Prof. Dr. rer. nat. Maria-Elisabeth Michel-Beyerle
Former professor of physical chemistry
TUM Department of Chemistry



Prof. Dr.-Ing. Dr. h.c. mult. Dr.-Ing. E.h. mult. Joachim Milberg
Former professor of mechanical engineering tools and business management
TUM Department of Mechanical Engineering



Prof. Dr. med. Michael Molls
Former professor and director of the Clinic for Radiotherapy and Radiation Oncology
TUM School of Medicine



Prof. Dr.-Ing. Winfried Nerdinger
Former professor of history of architecture
TUM Department of Architecture



Prof. Dr.-Ing. Dr.-Ing. E.h. Dr. h.c. mult. Friedrich Pfeiffer
Former professor of mechanics
TUM Department of Mechanical Engineering



Prof. Dr. rer. nat. Bernd Radig
Former professor of image analysis and knowledge-based systems
TUM Department of Informatics



Prof. Dr. rer. pol. Prof. h.c. Dr. h.c. Ralf Reichwald
Former professor of business administration – information, organization and management
TUM School of Management



Prof. Dr. med. Dr. phil. Johannes Ring
Former professor of dermatology and allergy-immunology, and director of the Department of Dermatology and Allergy Biederstein
TUM School of Medicine



Prof. Dr.-Ing. Ingolf Ruge
Former professor of integrated circuits
TUM Department of Electrical and Computer Engineering



Prof. Dr.-Ing. Dr. h.c. mult. Reinhard Rummel
Former professor of astronomical and physical geodesy
TUM Department of Civil, Geo and Environmental Engineering



Prof. Dr. techn. Dr. h.c. Peter Russer
Former professor of high frequency engineering
TUM Department of Electrical and Computer Engineering



Prof. Dr.-Ing. Dr. h.c. Gottfried Sachs
Former professor of aeronautical engineering and control
TUM Department of Mechanical Engineering



Prof. Dr. rer. nat. Erich Sackmann
Former professor of experimental physics
TUM Department of Physics



Prof. Dr. rer. nat. Dr. h.c. Edward W. Schlag Ph.D.
Former professor of physical chemistry
TUM Department of Chemistry



Prof. Dr. rer. nat. Karl-Heinz Schleifer
Former professor of microbiology
TUM School of Life Sciences Weihenstephan



Prof. Dr. med. Albert Wilhelm Schömig
Former professor of internal medicine
TUM School of Medicine



Prof. Dr. med. Dr. h.c. Jörg-Rüdiger Siewert
Former professor of surgery
TUM School of Medicine



Prof. Dr. Dr. h.c. Herbert Spohn
Former professor of mathematical physics
TUM Department of Mathematics



Prof. Dr.-Ing. Theodor Strobl
Former professor of hydraulic engineering and hydraulic management
TUM Department of Civil, Geo and Environmental Engineering



Prof. Dr. med. Anna-Elisabeth Trappe
Former professor of neurosurgery
TUM School of Medicine



Prof. Dr. med. Drs. h.c. Hermann Wagner Ph.D
Former professor of microbiology
TUM School of Medicine



Prof. Dr. Dr. habil. Drs. h.c. Gerd Wegener
Former professor of wood studies and wood technology
TUM School of Life Sciences Weihenstephan



Prof. Dr. Wolfram Weise
Former Professor of Theoretical Physics (applied quantum field theory)
TUM Department of Physics



Prof. Dr. Dr.-Ing. Drs. h.c. Peter A. Wilderer
Former professor of water quality and waste technology
TUM Department of Civil, Geo and Environmental Engineering

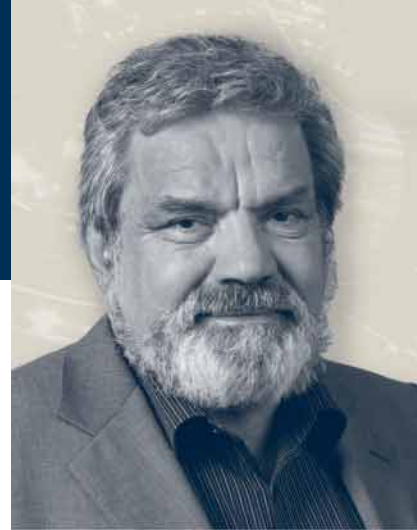


Prof. Dr. rer. nat. Dr. h.c. mult. Christoph Zenger
Former professor of applied engineering in information technology and numeric programming
TUM Department of Informatics

Prof. Dr.
Gerhard Abstreiter

Former Professor of Experimental Semiconductor Physics and Director of the Walter Schottky Institute as well as the IAS, born November 27, 1946

As the author of more than 600 scientific publications, Gerhard Abstreiter is an internationally renowned researcher in the field of semiconductor physics. He has made groundbreaking contributions in the identification and classification of the structural, electrical, and optical properties of semiconductor-nanostructures, as well as the use of molecular beam epitaxy for the realization of ultra-pure hetero- and nanostructures. His team have been at the global cutting edge in research into semiconductor-nanostructures since the establishment of the Walter Schottky Institute by Gerhard Abstreiter (1988). He founded the field of low-dimension electron systems, and has carried out pioneering work that is recognized worldwide in many fields. This applies to his pioneering identifications of the charge carrying properties of silicon MOS-systems, as well as for his groundbreaking discovery that highly mobile electron gases can be generated by tensioning silicon-germanium. Gerhard Abstreiter's findings are applied in nearly all complex microelectronic circuits, and were the basis for his invention of a heterostructural-field-effect-transistor, which is, for example, used as a low-noise pre-amplifier in satellite antennas, and in mobile telephones. He established the field of semiconductor quantum-dots, and made it a flourishing one by carrying out the first spectroscopic detection of the discrete shell structure of electrons and excitons. The main focus areas of recent work in this field is on the possible uses of spin properties in semiconductors, as well as in the realization of hetero-nanowires. Abstreiter's team succeeded in giving a functional demonstration of a GaAs based nanowire laser built directly on silicon. His diverse activities also encompass the manipulation of DNA on gold surfaces, and the development of semiconductor-based building parts for uses in the fields of biosensorics and molecular electronics. Gerhard Abstreiter has won many awards for his accomplishments in semiconductor physics and nanoscience, as well as receiving recognition for his work worldwide.



1968-1973	Studies in Physics, TUM
1973-1975	Doctorate, TUM
1975-1979	Research Assistant, Max-Planck-Institute for Solid State Research, Stuttgart and Grenoble
1979-1987	Team leader and habilitation (1984), TUM Department of Physics
1987-2013	Professor for Experimental Semiconductor Physics and Director at the Walter Schottky Institute (1988), TUM
2010	Carl von Linde Senior Fellow, Institute for Advanced Study, TUM
2013-2015	Director of the Institute for Advanced Study, TUM

low-dimensional electron systems
experimental semiconductor physics
nanostructures molecular beam epitaxy
spin electronics optoelectronics biosensorics

Visiting Professor, University of Innsbruck, Austria (1984)
Visiting Professor, University of California, Santa Barbara (1995), USA; Distinguished Visiting Professor (since 2006)
visiting professor, Columbia University, New York, USA (2000)
Visiting Professor, University of Tokyo, Japan (2000, 2004, 2009, 2010, 2011)

Fellow of the American Physical Society (since 1992)
Japan Society for the Promotion of Science (JSPS) Senior Fellowship, Japan (2000)
Member of the Bavarian Academy for Sciences (since 2007)
Member of the German Academy of Engineering Sciences (acatech) (since 2009)
Japan Society of Applied Physics International Fellow (since 2014)
Sub-project leader in various DFG, BMBF and EU research associations
Sub-project leader in the SFB 128 "Elementare Anregungen an Oberflächen" (1980-1987)
Initiation and development of the Walter Schottky Institute (1985-1988)
Sub-project leader and spokesperson for the SFB 348 "Nanometer Halbleiter Bauelemente" (1991-2003)
Sub-project leader and spokesperson for the SFB 563 "Bioorganische Funktionssysteme auf Festkörpern" (2000-2007)
Initiation and development of the Centre for Nanotechnology and Nanomaterials (2008-2010)
International Postgraduate Student School Spokesperson "Complex Interfaces" (2005-2011)
Carl von Linde Senior Fellow und Leader of the Focus Group "Nanophotonics" at the TUM Institute for Advanced Study (2008-2013)
Sub-project leader in the SFB 631 "Festkörperbasierte Quanteninformation" (2003-2015)
Co-spokesperson and member of the excellence cluster "Nanosystems Initiative Munich" (since 2006)

Walter-Schottky-Prize by the German Physics Association (1986)
Gottfried-Wilhelm-Leibniz-Prize by the German Research Foundation (1987)
Max-Born-Prize by the German Physics Association and the British Institute of Physics (1998)
Friedrich Wilhelm Joseph von Schelling-Prize by the Bavarian Academy for Sciences (2006)
Heinz Maier-Leibnitz Medal from TUM (2006)
Stern-Gerlach-Prize by the German Physics Association (2014)

Prof. Dr.-Ing.
Kurt Antreich

Former professor of electronic design automation
born December 7, 1934



Kurt Antreich worked on the creation and development of the new chair for electronic design automation (EDA), established 1975, on the basis of extensive third-party fundraising. He led this new chair to become an internationally recognized research center, in which at times more than 20 scientists were employed. Kurt Antreich focused his research on the synthesis and testing of logic modules, the automation of analog circuit design and layout synthesis. The automation of electronic design development is a substantial scientific challenge and of exceptional economic importance worldwide. The algorithms he and his collaborators developed for automated electronic design can be found not only in the design machinery of well-known computer-aided design (CAD) suppliers, but also in the machinery used by large semi-conductor manufacturers. Together with his former collaborators, he established an enduringly successful company from the fruits of his research. Along with his proximity to hands-on work, which Kurt Antreich values highly, his research is exceptional for its uncompromising scholarly depth – which frequently allowed him to prevail over competing research groups. For many decades, and despite particularly strong international competition, Kurt Antreich has been instrumental in defining the technical and academic development of his field from the very beginning and has left a lasting impression on the area of electronic design automation.

1954-1959	Studies in communications engineering, TUM
1959-1975	Development engineer, laboratory director, department head, director of AEG-Telefunken, Backnang
1966	Doctorate in communications engineering, TH Karlsruhe
1973	Appointed to the University of the German Federal Armed Forces, Munich
1975	Appointed to the University of Saarland, Saarbrücken
1989	Appointed to the University of Paderborn in connection with the directorship of the Institute for System Design Technology of the Society for Mathematics and Data Processing, St. Augustin
1975-2003	Professor of electronic design automation, TUM



integrated electronic systems
electronic design automation computer aided design
electronic design automation

- Member and director of the department committee “Linear and Non-Linear Networks” of the Information Technology Society (ITG) in the Association for Electrical, Electronic and Information Technologies (VDE) (1965-1976)
- Member of the organization and program committee “1976 IEEE International Symposium on Circuit and Systems” (ISCAS), Munich
- Member of the Board of Directors of the ITG in the VDE (1978-1982)
- Director of the department committee “Computer-Aided Design” of the ITG in the VDE (1985-1989)
- Member of the Board of Supervisors of the company ANT Communications Engineering GmbH, Backnang (from 1995 Bosch Telecom)
- Member of the programming committee as well as the Organizational Committee and European Representative of the IEEE Conference on Computer-Aided Design (1992, 1993/1994, 1995)
- Acceptance of his publication in the book “20 Years of Excellence in Computer-Aided Design”, published by the International Conference on CAD (2003)
- Member of the programming committee of the European Design Automation Conference (1990-1995) and topic chair of the Conference on Design Automation and Test in Europe (2001, 2002)
- Member of the scientific class of the “Sudetendeutsche Akademie der Wissenschaften und Künste e. V.” (since 2008)

- Prize from the Information Technology Society (ITG) in the Association for Electrical, Electronic and Information Technologie (VDE) (1976)
- Fellow of the Institute of Electrical and Electronic Engineers (IEEE) (1994)
- IEEE Circuits and Systems Society Golden Jubilee Medal (1999)
- German Federal Cross of Merit (2000)
- Lifetime Achievement Award 2003 from the European Design and Automation Association (EDAA) (2003)
- EDA-Medal from the edacentrum e. V. (2003)
- Karl-Küpfmüller-Prize from the ITG in the Association for Electrical, Electronic and Information Technologie (VDE) (2004)
- Ritter-von-Gerstner-Medal from the “Sudetendeutsche Akademie der Wissenschaften und Künste e. V.” (2008)
- Lifetime Achievement Award 2015, ACM International Symposium on Physical Design (2015)

Prof. Dr. med.
Edgar Biemer

Former professor of plastic, reconstructive and cosmetic surgery
 born October 31, 1940



After his education as a specialist in plastic surgery, Edgar Biemer began to shift his primary focus of interest to microsurgery. In 1975, he founded the first replantation center in Germany – the second in Europe – in the university hospital Klinikum rechts der Isar. For more than 40 years, Edgar Biemer developed innovative operative techniques in plastic surgery there. In the last 24 years, he has been director of the Department of Plastic, Reconstructive and Cosmetic Surgery at TUM, which became an internationally renowned center for non-attached tissue transplantation. As well as this, in 1998 he introduced plastic surgery to Tajikistan. Currently he is developing the plastic surgery infrastructure in Baku, Azerbaijan, and is active in educating the doctors there. Together with Dr Wolfgang Duspiva, he is the author of the first German textbook for reconstructive microsurgery, as well as a leading member of the most important international scientific societies for plastic, reconstructive and cosmetic surgery. In 2008, together with colleagues at the university hospital Klinikum rechts der Isar, he headed a team of 40 professionals that was successful in a pioneering achievement: the world's first transplantation of two complete arms. In 2012, Edgar Biemer was awarded the Dieffenbach Medal – the highest honor that the German Society of Plastic, Reconstructive and Cosmetic Surgeons (Deutsche Gesellschaft der Plastischen, Rekonstruktiven und Ästhetischen Chirurgen) can confer on German national and international candidates.

plastic surgery aesthetic surgery
 tissue transplantation innovative
 operative techniques reconstructive
 microsurgery medicine

- Establishment of the first replantation center at the university hospital Klinikum rechts der Isar (1975)
- Founding member and first secretary of the German-speaking Working Group for peripheral nerve and vascular microsurgery (DAM) (1981-1985)
- Secretary and president of the International Society of Reconstructive Microsurgery (ISRM), later the World Society of Reconstructive Microsurgery (WSRM) (1993-1995)
- President of the German Society of Plastic, Reconstructive and Aesthetic Surgery (DGPRÄC) (1994-1995)
- Founding member and first president of the Association of German Aesthetic Plastic Surgeons (VDÄPC) (1995)
- Establishment of the Association of Plastic Surgeons in Tajikistan (1998)
- Honorary member of the American Society of Reconstructive Microsurgery (since 1992)
- Honorary member of the Argentina Association of Orthopedics and Traumatology (since 1994)
- Honorary member of the Indian Association of Surgeons (since 2002)
- Honorary member of the Royal College of Surgeons of Edinburgh (2002)
- Honorary member of the of the DGPRÄC (since 2011)
- Honorary member of the of the German-speaking Working Group for peripheral nerve and vascular microsurgery (DAM) (2012)
- Honorary member of the Association of Plastic Surgeons of India (2013)
- Honorary member of the German Society for Surgeons (DGCH) (2015)

- Erich-Lexer-Prize from the German Society of Surgery (DGCH) (1997)
- Honorary member of the Royal College of Surgeons of Edinburgh (2002)
- Heinz Maier-Leibnitz Medal from TUM (2008)
- Herbert-Höhler-Needle from the Association of German Aesthetic Plastic Surgeons (VDÄPC) (2009)
- Dieffenbach Medal from DGPRÄC (2012)
- German Federal Cross of Merit (2014)

1959-1966 until 1972	Studies in medicine at the universities of Frankfurt, Vienna and London Training as specialist in surgery, TUM; further training in centers of plastic surgery in Uppsala and Gothenburg, Sweden; the UK and USA
from 1973 1985	Department of Plastic Surgery and Reconstructive Surgery, TUM Professor of plastic surgery, TUM
1986-2007 since 2008	Professor and director of the Department of Plastic surgery and Reconstructive Surgery, TUM Group practice with Dr Peter Caspari, Munich



The name Adolf Birkhofer is closely linked with a prescient concept of reactor safety – a hallmark of German nuclear technology that has garnered worldwide recognition. His commitment to the Reactor Security Commission (RSK), to which he belonged for more than three decades – many years as its director – played an integral role in this. The broad extent of his academic work is consistent with the interdisciplinary character of reactor safety. It reaches from reactor physics to the area of probabilistic safety analysis, in which he became renowned for his Deutsche Risikostudie Kernkraftwerke (German study on the risk of nuclear power plants), among other things. Adolf Birkhofer continually initiated and helped to devise international developments in this field. For example, he exerted himself for the development of German-French safety standards for new pressurised water reactors, which were implemented in the European Pressurised Water Reactor. His reputation within Germany and abroad is reflected in his many prizes and honors, honorary doctorates and appointments to international boards and panels. Since 1997, he has been advising the Nuclear Energy Safety Council of the President of the Armenian Republic, and he has been serving on the executive committee of the German Atomic Forum since 2000. The promotion of academic competence in nuclear technology and reactor safety in Germany has been a matter of particular concern to him. With the founding of ISaR in 2003 (Institute for Safety and Reliability), he created a successful organization that, together with TUM, is committed to offering a valuable education in nuclear technology and reactor safety in Germany.

nuclear reactor physics control engineering
probabilistic safety analysis
nuclear reactor safety theoretical physics
electrical engineering nuclear engineering

- Chair of the Committee on the Safety of Nuclear Installations (CSN) of the OECD (1984-1988)
- Committee chair of the EU's commission on science and technology (1984-1988)
- Member (since 1986) and chairperson of the International Nuclear Safety Advisory Group (INSAG) for the director general of the International Atomic Energy Agency (IAEA) (1986-1991)
- Honorary member of the Nuclear Engineering Society (KTG) (1993)
- Honorary fellow of the European Nuclear Society (ENS) (1994)
- Chair of the Nuclear Energy Safety Council of the President of the Armenian Republic (since 1997)
- Chair of the advisory board for the European Bank for Reconstruction and Development (EBRD) (1993-1998)
- Member of the academic-technical advisory board (WTB) of the Bavarian state government (1988-2002)
- Member of the academic advisory board of the Bavarian Research Foundation (1988-2002)
- Chair of the German-French Association for Science and Technology (DFGWT) (since 2002)
- Expert on the Commission Nationale d'Evaluation (CNE2), France (since 2012)

1953-1961	Studies in communications engineering, TH Munich, and in theoretical physics, University of Innsbruck
1958-1963	Work in the industry at Siemens, Halske and at the Bavarian technical inspection agency (TÜV)
1964	Doctorate, University of Innsbruck
1963-1971	Director of the laboratory for reactor control and site safety, TUM
1977-2002	Scientific/technical director of the the Association for Reactor and Plant Safety (GRS)
1975-2002	Professor of reactor dynamics and safety, TUM
since 2003	Director of the Institute for Safety and Reliability (ISaR), Munich

- Otto Hahn Prize from the city of Frankfurt (1976)
- Honorary doctorate from the University of Karlsruhe (1983)
- Fellow of the American Nuclear Society (1983)
- Chevalier de la Légion d'honneur (1987)
- Bavarian Order of Merit (1988)
- Tommy Thompson Award for Reactor Safety (1989)
- Aachen and Munich Prize for Technique and Applied Natural Sciences (1993)
- Commander's Cross of the Federal Republic of Germany (1994)
- Honorary doctorate from the Kurchatov Institute, Moscow, Russia (1998)
- Bavarian Maximilian Order for Science and Art (2001)
- Commandeur de l'Ordre des Palmes Académiques (2007)
- Georg C. Laurence Pioneering Award der American Nuclear Society (2013)

Prof. Dr. Dr. h.c.
Manfred Broy

Former Professor of Software & Systems Engineering
born October 8, 1949



TUM Department of Informatics



Manfred Broy conducts research into the areas of modeling and developing complex software-intensive systems. One of his goals is to further develop methods of software & systems engineering based on mathematical and logical models. A particular focus of his work is quality assurance and the long-term evolution of systems. He has over 350 scientific publications to his name and belongs to the most cited computer scientists worldwide. Manfred Broy was one of the first to realize the importance of extending computer science in Germany to technical applications, especially in embedded systems. At his chair, research is focused on the fields of model-based specification and the development of software-intensive systems, requirements engineering, and software quality and maintainability. Beyond his achievements in science, Manfred Broy is also a driving force in the closer cooperation between the economy and science. The findings and work conducted by his research group have involved numerous industrial collaborations and lead to important innovations. They are successfully applied in telecommunications, aviation electronics, automobile construction, banking, and in business information systems. Manfred Broy is active as an expert and a jury member in national and international IT competitions, has an inside line on complex IT projects, and is a renowned agitator for change and improvement in processes in commerce and the economy. Since March 2015, Manfred Broy, as the founding president of the Centre for the Digitalization of Bavaria (ZD.B), has been commissioned to construct a platform dealing with key issues related to digitalization, which functions as a link between university research, extramural research, and industrial development.

embedded systems software maintenance
software quality architecture and services
context-aware systems modelbased development
requirements engineering

Member of the European Academy of Sciences (1992)

Received the Federal Cross of Merit (1996)

Member of the German Academy of Natural Sciences "Leopoldina" (2003)

Awarded honorary doctorate by Passau University (2003)

Fellow of the German Informatics Society (2004)

Bavarian State Prize for Education and Culture (2006)

Member of the Council of Technical Sciences (2006)

Bavarian Maximilian Order for Science and Art (2012)

Member of the Bavarian Academy of Sciences (2014)

Collaborative Research Center 342 "Methoden und Werkzeuge für die Nutzung paralleler Architekturen" (1990-1999)

Spokesperson of Fortiss directorate (Innovationszentrum für software-intensive Systeme) at the TUM (2009)

Project leader for the Acatech study "agendaCPS" (2012)

Scientific spokesperson for the research alliances SPES and SPES_XT (2009-2015)

Long-term research collaborations with the companies BMW, MAN and Munich RE

1976	Diploma in Mathematics, specializing in Computer Science, TUM
1980	Doctorate in Mathematics, TUM
1976-1983	Research Assistant, Institute for Mathematics, TUM
1983	Founding Dean of the Faculty of Mathematics and Computer Science, Passau University
1983-1989	Professor of Computer Science, Passau University
1992	Founding Dean of the Faculty of Computer Science, TUM
1989-2015	Professor of Computer Science, TUM
since 2015	Founding President of the Centre for the Digitalization of Bavaria (ZD.B)

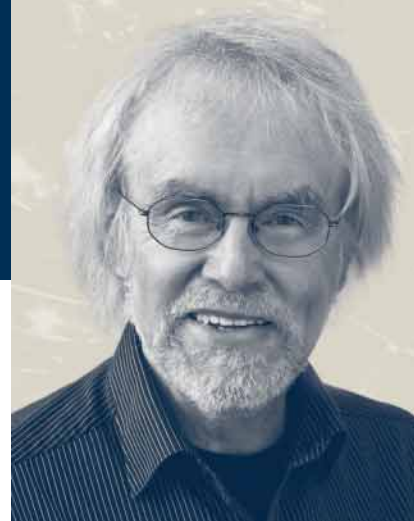
Gottfried-Wilhelm-Leibniz-Prize by the DFG (1994)

Max Planck Fellow at the Institute for Software Systems, Kaiserslautern (2006)

Konrad-Zuse-Medal by the German Informatics Society (2007)

Prof. Dr.
Andrzej J. Buras

Former professor of theoretical elementary particle physics
born October 26, 1946



A ndrzej Buras is recognized as one of the world's leading scientists in applied quantum field theory. His research in this area is aimed at constructing a "flavor theory" (diverse quarks and leptons). As part of this, he examines various extensions of standard models of elementary particle physics with an emphasis on flavor-changing meson decay and violation of CP symmetry. He carried out studies on tests of the standard model and alternative proposals among others of supersymmetry, Little Higgs models and models with extra spatial dimensions. With more than 240 academic publications, he is among the five most cited elementary particle theorists in Europe. Even after becoming a professor emeritus, he continues to conduct research at the TUM Institute for Advanced Study (IAS) as the 2011 recipient of an ERC Advanced Grant. Twelve of his former PhD students occupy professor positions at various research centers and Universities in Germany, England and USA.

Member of the organization committee of the Ringberg Workshop "Hadronic Matrix Elements and Weak Decays" (1988), "Advances in Non-Perturbative and Perturbative Techniques" (1994), "Heavy Flavors" (2003, 2006), "Flavors and Jets" (2009)

Chair of the organization committee of the DESY (German Electron Synchrotron) Workshop "Waiting for the Top Quark" (1990), "Discrete Symmetries" (1996), "CP Violation" (2000)

Co-organizer of the workshop "Indirect searches for New Physics at the time of the LHC", Galileo Galilei Institute for Theoretical Physics (GGI) (2010)

until 1971	Study of physics, University of Warsaw
1972	Doctoral studies in high energy theoretical physics, Niels Bohr Institute, University of Copenhagen
1972-1975	Postdoctoral fellow, Niels Bohr Institute, University of Copenhagen
1975-1977	Fellow in the Theoretical Physics Group at CERN, Geneva
1977-1982	Visitor, staff member, associate scientist at Fermilab (Fermi National Accelerator Laboratory), USA
1982-1988	Scientific associate, Max Planck Institute of Physics, Munich
1988-2012	Professor of theoretical elementary particle physics, TUM
2008-2011	Carl von Linde senior fellowship, Institute for Advanced Study, TUM

elementary particle physics quantum field theory
Little Higgs model meson disintegration
CP symmetry **quarks leptons**

Member of the programming and organization committee, CERN (1985-1988)

Member of the organization committee of the International Conference on High Energy Physics, Munich (1988)

Member of the referee committee "Middle Energy" Federal German ministry of research and technology, Bonn (1989-1993)

Member of the programming and organization committee, Fermi National Accelerator Laboratory, USA (1991-1995)

Member of the editorial board, Physical Review D Journal, American Physical Society (1992-1995)

Review board for elementary particle physics, German Research Foundation (DFG) (1996-2004)

Member of the Physics Research Committee of German Electron Synchrotron (DESY) research center (1998-2002)

Member of the editorial board, Physical Review Letters magazine, American Physical Society (2002-2005)

Member of the European Committee for Future Accelerators (ECFA), CERN, Geneva (1986-1992, 2002-2006)

Member of the advisory committee (BELLE), KEK High Energy Accelerator Research Organization, Japan (2006-2010)

Research group leader of the excellence cluster "Origin and Structure of the Universe", TUM (2007-2011)

Leader of the focus group "Fundamental Physics", TUM-IAS (Institute for Advanced Study) (from 2007)

Member of the advisory council, TUM-IAS (2008-2014)

Member of the Bavarian Academy of Sciences and Humanities (from 2010)

International member of the Polish Academy of Punditry (PAUZA), Krakow (from 2011)

International member of the Polish Academy of Science (PAN), Warsaw (from 2013)

Distinguished lecturer, University of Alberta (2004)

Schrödinger guest professor, University of Vienna (2010)

Polish-German Marian Smoluchowski-Emil Warburg Physics Prize, collaborative award from the German and Polish Physics Societies (2007)
ERC Advanced Grant (2010)

Prof. Dr. med. Dr. h.c. mult.
Meinhard Classen

Former professor of internal medicine, university hospital Klinikum rechts der Isar, born August 12, 1936



A substantial portion of Meinhard Classen's academic work concerns itself with the further development of endoscopy. He introduced endoscopic retrograde cholangio pancreatography (ERCP) and was the first to implement endoscopic papillotomy (EPT), which are today routine treatment methods for gallstones, stenoses and tumors of the bile duct system and pancreatic duct. More than anyone else, Meinhard Classen influenced the development of endoscopy as a therapeutic discipline. His research brought him international renown, as evidenced by the many academic honors, international memberships and distinctions he has received. He played a large part in important academic works on the dissolution of gallstones, acid secretion and ulcer treatment and about the role of gastrointestinal hormones. Moreover, he has also written several large standard textbooks on internal medicine as well as important works about endoscopy. Additionally, he has been and continues to perform diverse editorial services for important international professional journals. Since he has become a professor emeritus, he has devoted himself not only to intestinal cancer prevention in Germany, but also, within the scope of international cooperation, the prevention of all malignant illnesses of the gastrointestinal tract. The development of gastroenterology across the entire world, particularly in Africa and Asia, has become a special focus of his work.

- Member of the German National Academy of Sciences Leopoldina (1980)
- International member of the Academy of Sciences, Brazil
- International member of the Russian Academy of Medical Sciences
- Honorary member of the American Society for Gastrointestinal Endoscopy (ASGE)
- Honorary member of the British Society of Gastroenterology
- President of the European Congress for Endoscopy (1980)

1956-1962	Studies in medicine, universities of Bonn, Freiburg (im Breisgau) and Vienna
1962	Doctorate in Medicine, University of Bonn
1970	Consultant of internal medicine
1972	Consultant of gastroenterology
1970-1974	Assistant medical director of internal medicine, Erlangen University Hospital
1974-1979	Chief medical director at Hamburg-Barmbek Hospital
1979-1984	Professor of internal medicine, Johann Wolfgang Goethe University Frankfurt/Main
1985-2002	Professor of internal medicine, TUM

tumor treatment EPT gastroenterology
 medical engineering endoscopy
 endoscopic papillotomy internal medicine

- Vice-president of the European Society of Gastrointestinal Endoscopy (1980)
- President of the German Society for Digestive and Metabolic Diseases (DGVS) (1987)
- President of the German Society for Internal Medicine (DGIM) and its 100th congress
- Founder and chair of the Gastroenterology Foundation e. V. (since 1995)
- Vice-president of the World Organization of Digestive Endoscopy (OMED) (1990-1997)
- President of the Society for Gastroenterology in Bavaria (2001)
- General secretary and President (1998-2002) of the World Organization of Gastroenterology (OMGE) (1990-1998)
- Co-chair of the International Digestive Cancer Alliance (IDCA) (2002)

- Schindler Prize from the European Society for Endoscopy (1970)
- Thannhauser Prize from the DGVS (1973)
- Fresenius Prize from the German Chemical Society (GDCh) (1992)
- Honorary doctorate from Cerrapasha University, Istanbul, Turkey (1992)
- Golden Award of Honor from the Society of Bavarian Internists (1995)
- Officer's Cross from the Federal Republic of Germany (1995)
- Honorary doctorate from the University of Iași (now the Alexandru Ioan Cuza University), Romania (1996)
- Honorary doctorate from the University of Athens, Greece (1996)
- Bavarian Order of Merit (2000)
- Austrian Cross of Honor for Science and Art, First Class (2003)
- Honorary doctorate from the University of Wrocław, Poland (2005)
- Thannhauser medal from the DGVS (2006)
- Honorary doctorate from Charles University in Prague, (2009)
- Ernst v. Bergmann Medal from the German Society for Internal Medicine (DGIM) (2009)
- Order of Merit of Burgenland (Austria) (2014)

Prof. Dr.-Ing.
Jörg Eberspächer

Former professor of communication networks
born October 8, 1945



The name Jörg Eberspächer is closely linked with research in telecommunication systems and networks. From 1977 until 1989 he was with Siemens AG, where he was responsible for research on digital voice/data switching and intelligent networks. In 1990 he was appointed full professor at TUM in the department of Electrical and Computer Engineering (ECE) and head of the newly established institute of communication networks. The boom in communications technology (mobile phones, Internet, etc.) also influenced his extensive research and teaching activities. He focused on the development and analysis of novel switching architectures and high speed optical and wireless networks, the “Future Internet”, self-organizing networks and planning of resilient networks as well as the application of network technologies in, among others, vehicular communication. Jörg Eberspächer was the chair of the Information Technology Society (ITG) within the Association for Electrical, Electronic and Information Technologies (VDE) – which in 2006 conferred on him an honorary membership. From 2002 to 2005 he was the dean of his department. He strongly supports interdisciplinary discourse on new developments in information technology, to which he is dedicating himself in the MUENCHNER KREIS, in the VDE and the two national academies Leopoldina (German National Academy of Sciences) and acatech (National Academy of Science and Engineering). After his retirement, his advice continues to be sought out by government ministries, private industry and research institutions both in Germany and abroad. Jörg Eberspächer works in various aspects of TUM, such as the Center for Digital Technology and Management (CDTM), and is chairman of the friend’s association of the ECE department EIKON e. V.

Coordinator of the German Research Foundation (DFG) priority program 1102: Adaptivity in Heterogenous Networks with Wireless Access (2000-2006)

Participation in the DFG Collaborative Research Center Transregio TR-28: Cognitive Cars – Kognimobil (2005-2010)

Participation in various research projects of the German Federal Ministry of Education and Research (2003-2012)

1965-1970	Study of electrical engineering, University of Stuttgart
1971-1977	Member of the research staff at the institute of communications, University of Stuttgart
1976	Doctorate in electrical engineering, University of Stuttgart
1977-1990	Managerial positions in research and development, Siemens AG
1990-2012	Professor of communication networks, TUM



telecommunication systems
information technologies network architecture
blackout-proof networks circuit switching techniques

Senior member of the Institute of Electrical and Electronics Engineers (IEEE), USA (since 1990)

Member of the “Münchner Kreis e. V.”, a non-profit, supranational organization for communications research (1991), chair of the Research Committee (1993-2014)

Co-founder of the Center for Digital Technology and Management (CDTM), Munich (since 1998)

Member of the board of management (1997-2002) and chair (2000-2002) of the Information Technology Society (ITG) of the Association for Electrical, Electronic and Information Technologies (VDE)

Visiting professor, Tongji University, China (2000)

Member of the advisory board at the Scientific Institute for Infrastructure and Communication Services GmbH (WIK), Bad Godesberg (since 2000)

Chair of the board of trustees of the Fraunhofer Heinrich-Hertz-Institut (HHI), Berlin (2003-2015)

Member of the board of trustees of the Fraunhofer Institute for Open Communication Systems (FOKUS), Berlin (2002-2014)

Member of the academic advisory board of the German Museum, Munich (since 2005)

Member of the German National Academy of Sciences Leopoldina (since 2005)

Honorary member of the VDE (2006)

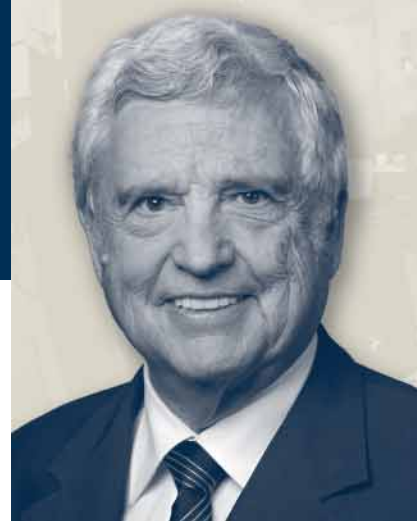
Chair of the academic advisory board of Lakeside Labs, Klagenfurt, Austria (since 2008)

Member of the National Academy of Science and Engineering (acatech) (since 2009)

Oskar von Miller Award from the German Museum, Munich (2004)
Society Award from the Information Technology Society (ITG) (2012)
Fraunhofer Medal of the Fraunhofer Society (2015)

Prof. Dr.-Ing.
Georg Färber

Former professor of real-time computing (RTC)
born April 6, 1940



Georg Färber did his doctorate on the information capacity of nervous tissue in order to turn his attention to the regulation of technical processes, with a particular focus on distributed and fault-tolerant systems. Precipitated by a study in 1980, which he co-authored, on microelectronics in mechanical engineering, more than 1,000 employees of diverse mechanical engineering firms were instructed on this topic. In the 1980s, Georg Färber expanded his field of activity to include real-time image and video processing for mobile robots; the robots Marvin, Minerva, Lpi and Lpi-2 emerged from the Robot Vision Group. Within the scope of the German Research Foundation's (DFG) Collaborative Research Centers (SFB), he developed methods and tools to design and verify "embedded real-time systems" from 1991. Later, the focus of the image and video processing group shifted to automotive applications: robust image and video processing secures the environment information necessary for driver assistance and autonomous driving. Within the scope of this work, a real-time-enabled structure for the integration of cognitive function and a bioanalog vehicle camera emerged – the visual perception ability of which improves with use. Together with co-operative partners, they succeeded in entering the final round of the international competition of autonomous robotic vehicles, the DARPA Urban Challenge, in 2007. In addition to this, Georg Färber was involved with numerous projects on the subject of e-health. As well as his work as an academic, Georg Färber was also a successful businessman. Among other things, he founded, together with his brother, the company PCS in 1969 and developed the CADMUS workstation, which served for many years as the only European alternative to US machinery, and in 1985 he received the Elektronik-Innovationspreis. With his research in the fields of processors and real-time computer systems, autonomous robotics as well as cognitive vehicles, he achieved results that were recognized throughout the world. Since 2011, Prof. Färber has been an ombudsman at TUM and he was spokesperson for TUM's Emeriti of Excellence from 2011 to 2015.

1959-1964	Studies in electrical engineering, TH Munich
1967	Doctorate in electrical engineering, TH Munich
1969	Establishment of the company PCS
1988-1989	Technical director of Mannesmann Kienzle GmbH
2005-2007	Director of the Institute of Medical Engineering at TUM (IMETUM)
1973-2008	Professor of real-time computing, TUM



real-time computer systems
microelectronics real-time image processing
founder CADMUS workstation
cognitive vehicles process computers

- Member of TUM's senate (1992-1994)
- Member of the senate committee Collaborative Research Centers of the German Research Foundation (1991-1996)
- Member of the Munich Circle, a non-profit, international association for research in communication (since 1975)
- Member of the advisory committee on electronic data processing systems in the Max Planck Society (BAR) (1982-2002)
- Member of the board of directors of the Bavarian third-level collaboration center for Eastern Europe (BAYKONOST) (since 2002)
- Member of TUM's senate and board of management (2003-2007)
- Member of the board of trustees of the Fraunhofer-Institut für Informations- und Datenverarbeitung
- Member of various committees of the German Council of Science and Humanities
- Member of the board of trustees of the Research Center for Information Technology (FZI), Karlsruhe
- Member of the Bernstein Center for Computational Neuroscience (BCCN), Munich
- Active/former member of various industrial supervisory boards (Sick AG, Softing AG, SEP AG, TTTech Computertechnik AG, Kontron AG, Oerlikon AG)
- Founding spokesperson for the German Research Foundation's (DFG) Collaborative Research Center (SFB) 331: Information processing in autonomous, mobile handling systems (from 1986)
- Representative spokesperson for the German Research Foundation's (DFG) Collaborative Research Center (SFB) 462: Sensomotorik (from 1991)
- Founding spokesperson for the German Research Foundation's (DFG) Collaborative Research Center (SFB) 453: Virtual telepresence and teleoperation (from 1999)
- Spokesperson for the Research Cooperation for Bioanalogical Assistant Systems (FORBIAS) of the Bavarian Research Foundation (2004-2007)
- Representative spokesperson of the Transregional Collaborative Research Center 28 (since 2006)

Heinz Maier-Leibnitz Medal from TUM (2004)

Prof. Dr. rer. Nat.
Sighart F. Fischer

Former professor of theoretical physics
born September 23, 1938

Sighart Fischer strongly influenced the fields of theoretical chemical physics involving high-speed dynamics and molecular biophysics in Germany. In particular, he was able to explain rapid oscillation relaxation processes in liquids that had first been measured in the Kaiser-Laubereau Institute. He also succeeded in interpreting the femtosecond lifetime of activated solvated electrons. He further developed the classic Marcus Electron Transfer Theory utilizing quantum mechanical characteristics of molecular oscillation and so improved the interpretation of charge transfer after photostimulation within photosynthesis. His name is also connected with the introduction of extended solitary conditions in aggregates, which considerably furthered the understanding of solitons. Since 1982, Sighart Fischer was almost constantly involved in the work of various Collaborative Research Centers in the German Research Foundation (DFG). He was a guest professor at the Jagiellonian University in Krakow, and initiated and intensified the exchange with the Kurchatov Institute in Moscow. For eight years he was a library trustee of the Technische Universität München. Since he was made professor emeritus, Sighart Fischer has been involved with ongoing research in the TUM Leonardo da Vinci Center for Bionics.



TUM Department of Physics



theoretical chemical physics
high-speed dynamics electron transfer theory
biopolymer oscillation relaxation processes
molecular biophysics photosynthesis

Member of the German Society for Biophysics

Participant in the German Research Foundation's Collaborative Research Center (SFB) 143: Elementary processes of photosynthesis (1982-1993)

Participant in the German Research Foundation's Collaborative Research Center (SFB) 338: Adsorption on solid surfaces (1995-2001)

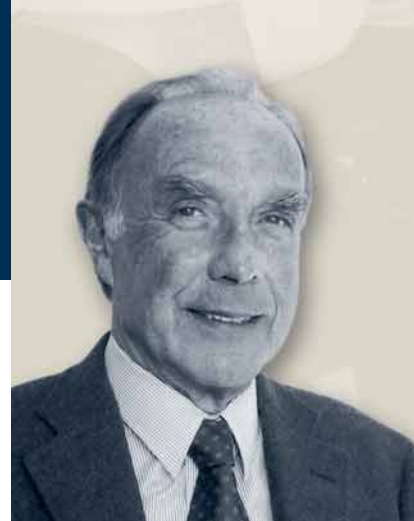
Spokesperson for the German Research Foundation's Collaborative Research Center (SFB) 377: Photoionization and charge transfer in large molecules, clusters and in the condensing phase (2000-2004)

Participation in the German Research Foundation's Collaborative Research Center (SFB) 533: Photoinduced dynamics of biopolymers

Alfred P. Sloan Fellow, USA (1970)

Smoluchovski Lecturer, Jagiellonian University, Krakow, Poland (2007)

1958-1963	Studies in physics, University of Göttingen
1964	Doctorate in physics, University of Göttingen
1965-1966	Academic assistant, University of Göttingen
1966-1968	Postdoctoral fellow, Northwestern University, University of Chicago, USA
1969-1972	Lecturer and assistant professor, Northwestern University
1973	Associate professor, Northwestern University
1974	Full professor, Northwestern University
1974-2006	Professor of theoretical physics, TUM



As professor in the field of radiology at the University of Heidelberg, Paul Gerhardt switched to the same position at TUM at the university hospital Klinikum rechts der Isar in 1986, a title he held until 2000. As an academic author and co-author, he can look back on numerous publications and lectures in the field of radiology. For many years, Paul Gerhardt was the publisher of the radiology magazine Röntgenpraxis (X-ray practice), which was also published in China. He received many honorary professorships at Chinese universities and an honorary doctorate from the Tongji Medical University in Wuhan, China. He directed several national and international symposia. Paul Gerhardt was the president of the German Radiology Society as well as a delegate of the International Society of Radiology and the European Society for Radiology. Students particularly prized his exceptional commitment to teaching. This dedicated medical professional devoted his life and career to the service of the university. This enthusiasm motivated Paul Gerhardt also upon retirement to function as an appointee of the President of TUM to provide valuable support in pursuing strategic goals, for example in collaborating with the Bavarian secondary schools (in a network comprising approximately 150 secondary schools) and the advancement of particularly talented students in the “Experienced Paths into Research” mentoring program. Through his initiative and TUM’s collaboration, a memorial stone was established for Dr Erich Paulun – one of the founders of the Deutsche Medizinschule für Chinesen (German medical school for Chinese, now named Tongji University) – in Pasewalk, Germany, where he was born. He also initiated further opportunities for collaboration with the universities of Shanghai and Wuhan, which will shortly be realized. Prof. Gerhard initiated the founding of the Erich-Paulun-Institute of the German-Chinese Business Association and has become its president since 2013. This institute is closely related to TUM by a cooperation agreement aiming at promoting the partnership.

medicine advancement of talent China
teaching secondary schools network radiology
radiology practice

- Publisher of the professional periodical Röntgenpraxis (1970-1995)
- Chairperson of the German Society of Radiology (DRG) committee on further education (1972-1975)
- General secretary of the 4th European Congress on Radiology (1979)
- Honorary professor of Tongji Medical University (now called Tongji Medical College), Wuhan, China (1983)
- Chair of the “Naturhistorischer-Medizinischer Verein zu Heidelberg” (1983-1986)
- President of the German Chinese Society of Medicine (1984-1987)
- Honorary professor of the Second Military Medical University, Shanghai (1988)
- President of the German Society of Radiology (DRG) (1988-1991)
- DRG delegate in the International Society of Radiology and the Society for Radiology (1988-1991)
- Honorary member of the German Chinese Society of Medicine (1991)
- Honorary member of the German Society of Radiology (DRG) (2000)
- President and initiator of the founding of the Erich-Paulun-Institut (2013)
- Corresponding member of numerous international radiology societies

1952-1959	Studies in chemistry and medicine at the universities of Greifswald, Halle and Tübingen and the Freie Universität Berlin
1961	Doctorate in medicine, Free University of Berlin
1967	Consultant in radiology, University of Tübingen
1972	Professor of medicine, University of Tübingen
1973	Medical director of the Department of Radiology, University of Heidelberg
1980-1986	Professor of radiology, University of Heidelberg
1986-2000	Professor of radiology, TUM

- Boris Rajewsky Medal from the European Society of Radiology (1980)
- Honorary doctorate from the University of Wuhan, China (1988)
- Albers-Schönberg-Medal from the German Society of Radiology (DRG) (1989)
- German Federal Cross of Merit (1995)
- Röntgen Medal from the city of Remscheid, Germany (1999)



Angelika Görg has received international recognition for her pioneering work in the field of proteomics. Since the early 1980's, she made a significant contribution to proteome analysis technologies. She has been the key researcher in developing the technology and use of immobilized pH gradient (IPG) based high-resolution two-dimensional electrophoresis for the separation and quantification of thousands of proteins, which are simultaneously expressed in a cell, tissue or organism under defined conditions. In contrast to the genome, the proteome is highly dynamic, complex and an analytical challenge. Angelika Görg has constantly refined the separation techniques for proteome analysis, including automated procedures and sophisticated instrumentations and applied for a wide range of medical and biological applications. Angelika Görg received numerous scientific awards in Europe and Asia (Tokyo, Beijing), reflecting her early international research activities and recognition in the field of proteomics. She also initiated and participated in the first EU-funded Proteome project (PAGES 1994). Moreover, she worked as senior editor and as member of the editorial boards of different proteome Journals, directed biannually, international proteome congresses in Munich (Proteomic Forum) and was for many years in the board of directors of the global Human Proteome Organization (HUPO). At TUM she was in the board of trustees (2006-2014) of the TUM's Institute for Advanced Study (IAS). At present, she is active as a committee member of the TUM Post-Doc Mobility Fellowship Program.

two-dimensional electrophoresis proteomics
allergies phytoproteomics methodology
microbiology clinical proteomics

- President of the German Electrophoresis Society (DEG) (1992-2001)
- Vice President of the the German Society of Proteome Research (DGPF) (2001-2005)
- Member of the board of directors of the Human Proteome Organization (HUPO) (2002-2012)
- Chair of HUPO's education and training committee (2002-2009)
- Member of the board of trustees of TUM's Institute for Advanced Study (IAS) (since 2007)
- Honorary member of the British Society for Proteome Research, Cambridge, UK (2010)
- Honorary member of the Spanish Proteomics Society, Segovia, Spain (2011)
- Research residencies at the University of Michigan, Ann Arbor, Michigan, USA, and the National Institutes of Health, Bethesda, Maryland, USA (1985-1987)
- EU Project: Proteome Analysis Group Europe, Saccharomyces Cerevisiae (PAGES) (1994-1998)
- Pharmacological project with Rhone-Poulenc: Proteomic analysis of differentially-regulated proteins in brain ischemia, Paris (2000-2002)
- German Research Foundation project: Stress proteins from lactic acid bacteria under sublethal high-pressure processing (2000-2004)
- BMBF (German Federal Ministry of Education and Research) Project: New Methods of Proteome Analysis: Implementation and Combination with Metabolome Analysis in the case of Corynebacterium glutamicum (2002-2005)

1963-1969	Studies in biochemistry, University of Tübingen, and food chemistry, Technical University of Stuttgart
1973	Doctorate in food technology and analytical chemistry, TUM-Weihenstephan
1973-1989	Academic councillor, TUM-Weihenstephan
1989	Habilitation, Dr.-Ing. habil, TUM-Weihenstephan
1989-1993	Academic director, TUM-Weihenstephan
1993-1995	Superintendent director of the Department of General Food Technology, TUM-Weihenstephan
1993-2009	Professor of proteomics, TUM-Weihenstephan

- Award from the British Electrophoresis/Biochemical Society, Glasgow (1992)
- Award from the Japanese Electrophoresis Society, Tokyo (1994)
- Heinz Maier-Leibnitz Medal from TUM (2001)
- German Federal Cross of Merit (2003)
- HUPO Distinguished Achievement Award in Proteomics, Beijing (2004)
- Bavarian Order of Merit (2011)

Prof. Dr. rer. nat.
Wolfgang Götze

Former professor of theoretical physics
born July 11, 1937



TUM Department of Physics



The name Wolfgang Götze is inseparable from the development of the field of liquids and glasses. With the Mode Coupling theory he developed in the 1980s, he took an important step closer to a detailed understanding of glass transition. This involved freezing liquids as a dynamic transition from ergodic to nonergodic behavior. His work stimulated this discipline like no other, and a long succession of experiments and computer simulations widely confirmed his early prognoses of amorphous systems. His numerous placements as visiting researcher brought him to internationally renowned institutes of physics in Finland, Denmark, Sweden, Italy and Hungary. Additionally, he did research at the Department of Physics at the University of Illinois (USA), the Steklov Institute of Mathematics in Moscow (Russia) and at the Department of Physics at the University of California, (USA), where early on he met up with proponents of the theory of condensed matter. Wolfgang Götze received the Max Planck Medal for his exceptional achievements, the highest national honor in the field of theoretical physics. His monograph “Complex Dynamics of Glass-Forming Liquids – a Mode-Coupling Theory” was published in 2009.

glass transition liquids solid state physics
amorphous systems mode coupling theory
glasses theoretical physics

Visiting researcher at the Steklov Institute for Mathematics, Moscow, Russia (1969)

Visiting researcher at the Institute for Theoretical Physics, University of Helsinki, Finland (1973)

Visiting researcher at the University of California, Department of Physics, Los Angeles, California, USA (1976)

Visiting researcher at the Research Institute for Physics, Academy of Science, Budapest, Hungary (1976)

Visiting researcher at the Ørsted Institute, University of Copenhagen, Denmark (1978, 1979)

Visiting researcher at the Institute for Theoretical Physics, University of Gothenburg, Sweden (1983, 1988, 1993)

Visiting researcher at the La Sapienza University, Department of Physics, Rome, Italy (1998, 2003)

Member of the German Physical Society

Member of the European Physical Society

1955-1961	Studies in physics, Humboldt University, Free University of Berlin
1963	Doctorate in theoretical physics, TUM
1963-1965	Research associate at the Max Planck Institute for Physics and Astrophysics, Munich
1965	Bursary from the Clemens-Plassmann-Stiftung for study at the University of Illinois, USA
1966	Research associate, University of Illinois, USA
1967-1996	Group director at the Max Planck Institute for Physics and Astrophysics, Munich
1970-2003	Professor of theoretical physics, TUM

Award from Stiftelsen Riksbankens Jubileumsfond, Stockholm, Sweden (1993)

Tomassoni Price from La Sapienza University, Rome, Italy (2006)

Max-Planck-Medal from the Germany Physical Society (DPG) (2006)

Prof. Dr. med.
Reiner Gradinger

Former Professor of Orthopedics and Trauma Surgery, former Medical Director of the University hospital Klinikum rechts der Isar, born November 9, 1947



Reiner Gradinger's attachment to the University hospital Klinikum rechts der Isar and the Technische Universität Munich is profound. It was here that he undertook all the significant steps in his medical career, from his medical studies, doctorate, specialist medical training and habilitation to his first appointment as a university professor in 1991. In 1993, he moved to the north of Germany, as a professor for orthopedics at the Medical University of Lübeck. However, he soon moved back to his home town: In 1997, he became the Chair of Orthopedics and Sport Orthopedics and Trauma Surgery. From 2007 up until the end of 2015 he was the medical director at the University hospital Klinikum rechts der Isar in Munich. The focus of Reiner Gradinger's clinical work and research lies in the reconstruction of muscular-skeletal defects caused by wear and abrasion, infections, or tumors. This includes tissue engineering, as well as the development of endoprosthetic systems, in which bio-medical technology plays an important role. Brand new materials were created in the orthopedics laboratories. Professor Gradinger is known for his outstanding resection of tumors with subsequent reconstructions using individualized implants. In 1992 he performed the first operation in which a pelvis, hip joint, thigh bone, and knee joint were all replaced at once. As well as his work at the University hospital Klinikum rechts der Isar, Reiner Gradinger has also been active on a nationwide basis. Amongst other things, he was a member of the board of the German Society of Surgery from 2002 to 2006, and assumed the office of president in 2009/2010.

1968-1974	Medical Degree in Würzburg and Munich (TU)
1975	License to practice medicine
1975-1977	Assistant, Institute of Pathology and Pathological Anatomy, TUM
1977-1980	Assistant doctor LMU, Großhadern
1980-1985	Assistant Orthopedic Hospital, TUM
1983	Specialist for Orthopedics
1984	Chief Senior Physician at the Clinic and Polyclinic for Orthopedics, University hospital Klinikum rechts der Isar, TUM
1991-1992	Associate Professor of Orthopedics, TUM
1992-1998	Professor of Orthopedics (C4), Medical University Lübeck
1998-2004	Professor of Orthopedics and Sport Orthopedics, TUM
2004-2014	Professor of Orthopedics and Trauma Surgery, TUM
2003	Senator at the TUM
2007-2015	Medical director of the University hospital Klinikum rechts der Isar, TUM

tissue engineering endoprosthesis systems
 orthopaedics **trauma surgery** sports medicine
 musculoskeletal disorders physical therapy
tumor resection

- President of the German-Japanese Orthopedic Society (1993-2006)
- Orthopedic Professorial Convention Spokesperson (1996-2003)
- National delegate of the European Hip Society (1999-2010)
- Member of the executive board of the German Society for Orthopedics and Orthopedic Surgery (DGOOC) (2002-2006), President (2005), Senator (since 2007)
- President of the Munich Tumor Centre (2005-2009)
- President of the German Society of Surgery (DGCH) (2009-2010)

- Member of the "Scientific Board of the European Federation of National Associations of Orthopedics Surgery and Traumatology" (EFORT)
- Member of the "Scientific Board of the International Society of Orthopedic Surgery and Traumatology" (SICOT)
- Member of several scientific advisory boards and editor of numerous national and international journals, such as: Hip International / Biomaterialien / Der Orthopäde
- Wissenschaftlicher Beirat: MMW - Fortschritte der Medizin / Zeitschrift für Orthopädie / Der Onkologe / Zeitschrift für Orthopädie und Unfallchirurgie / Zeitschrift für Medizinische Orthopädische Technik / Zeitschrift für Orthopädie und Rheuma

- Prize for best lecturer by the student representatives of the Faculty of Medicine, TUM (2005)
- Prize for reconstructive surgery and orthopedics by the Orthopädische Fachgesellschaft (2012)

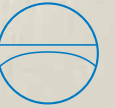
Prof. Dr.-Ing.
Harry Grundmann

Former professor of structural mechanics
born April 1, 1938

Harry Grundmann's research was originally focused on the non-linear effects of statics and dynamics in buildings. He shifted his emphasis while working as group division leader of the Collaborative Research Center "Building Reliability" to examine the effects of randomly changing stress and the weight distributing properties of frames, later also within the computation of transference between the building and the ground as well as a moving load and the ground. Harry Grundmann wrote innovative works on the development of computational methods to record the tremors created by vehicles on the ground surface or in tunnels, to transfer them below the ground surface and to introduce and transfer them into buildings. Additionally, his work also included the evaluation and interpretation of oscillation measurements in existing buildings. For many years, he was active as a peer reviewer in various Collaborative Research Centers of the German Research Foundation (DFG) and for research focus groups in his field of work. Supporting student exchange with international universities is of particular importance to Harry Grundmann. He was instrumental in the successful creation of double diplomas between TUM and other European universities, and he was one of the founders of the Bavarian-French University Center. As a valued expert, he also remained active after his retirement as an adviser in the field of structural dynamics, particularly for assignments concerning oscillation protection in structural civil engineering. He has been a member of the executive board of the Hans-Rudolf-Stiftung since 2002.



TUM Department of Civil, Geo and Environmental Engineering



non-linear stochastic dynamics
integrated transformation methodology structure-ground
transference stochastic mechanics
structural dynamics **structural reliability**

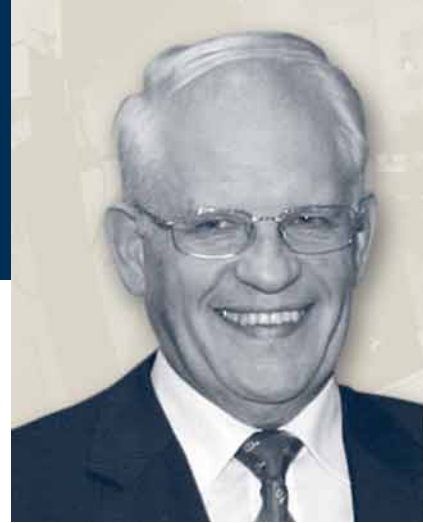
- Member of the Society for Applied Mathematics and Mechanics (GAMM)
- Member of the German Association for Computational Mechanics (GACM)
- Member of the Scientific Council of the International Center of Mechanical Science (CISM)
- Member of the National Academic Reform Commission for Structural Engineering (1978-1979)
- Chairperson of the CE/TH (Grandes Écoles/Technische Hochschulen), a presidential work group of the West German University Rectors' Conference (1986-1996)
- Vice President of TUM (1996-1997)
- Co-founder of the Bavarian-French University Center (1998)
- President of the European Association of Structural Dynamics (EASD) (1999-2002)
- Peer reviewer for the German Research Foundation's Collaborative Research Centers and research focus groups (1985-2005)
- Co-publisher of the journals Non-Linear Mechanics (1998-2008) and Archive of Applied Mechanics (1975-2008)
- Member of the board of directors of the Hans-Rudolf-Foundation (since 2002)

1957-1962	Studies in structural engineering, TH Hannover
1965	Doctorate in structural engineering, TH Hannover
1965-1970	Research associate, academic adviser, Department of Structural Engineering, Mapping and Surveying, TUM
1970-1971	Engineer at Dyckerhoff & Widmann AG
1971-1974	Founder of the Department of Structural Mechanics, TUM
1974-2003	Professor in the newly created department of structural mechanics, TUM

- German Federal Cross of Merit (1995)
- Officier de l'Ordre des Palmes Académiques (1999)
- Triangle d'or of the ENPC (École Nationale des Ponts et Chaussées) (1999)
- Honorary diploma from the Czech Mechanical Engineering Society (2003)
- Senior Research Award from the European Association of Structural Dynamics (2008)

Prof. Dr.-Ing. Dr.-Ing. E.h.
Joachim Hagenauer

Former professor of communications engineering
 born July 29, 1941



With his theoretical as well as applied research, Joachim Hagenauer was a major contributor to the development of efficient techniques of coding and decoding signals in transmission systems. He generated significant contributions to the development of modern digital communications transmission for mobile phones and the internet. In the area of theory, Joachim Hagenauer's interest lay in information theory and the theory of error-correcting codes. In the past, he focused his research on the "turbo principle" in communications engineering and, most recently, on information and communications theory in regard to its uses for research queries in genetics. In 2001, he was the first German academic to become the president of the renowned US Institute of Electrical and Electronics Engineers (IEEE) Information Theory Society. He received one of the most distinguished academic awards in the field of engineering: the IEEE's Alexander Graham Bell Medal. At TUM, the name Joachim Hagenauer is closely connected to the successful creation of the international master of science in communications engineering (MSCE), which is recognized worldwide. He served as director of this program from 1998 to 2008. In 2005, he was named a "highly-cited researcher" by the Thomson Citation Index. Joachim Hagenauer has been a member of the board of trustees of TUM's Institute for Advanced Study (TUM-IAS) from 2007 to 2014. Since 2011, he has also served as conflict mediator between doctoral candidates and their mentors as well as a reporter for appeals proceedings at TUM.

Visiting professor, Technische Universität Wien, Austria (2001)

Visiting professor, Universität Klagenfurt, Austria (2007)

1963-1968	Studies in theoretical electrical engineering, TH Darmstadt
1974	Doctorate in electrical engineering, Technical University of Darmstadt
1975-1976	Post-doctoral fellow at IBM's TJ Watson Research Center, New York, USA
1977-1981	Research associate at the Institute of Communications Technology of the German Test and Research Institute for Aviation and Space Flight
1981-1990	Director of the Department of Communications Theory at the Institute of Communications Engineering, German Aerospace Center (DLR)
1986-1987	Visiting researcher at AT & T Bell Laboratories, Holmdel and Murray Hill, New Jersey, USA
1993-2006	Professor of communications technology, TUM

digital communications transmission
 genetic code information theory mobile telephony
 coding theory

Senior member of the Institute of Electrical and Electronics Engineers (IEEE) (1987)

Distinguished lecturer of the IEEE Information Theory Society and the IEEE Communications Society (1992)

Founding member of the academic advisory council of the Institute for Experimental Mathematics of Universität Essen
 Chairperson of the professional council "Informations- und Systemtheorie" of the Information Technology Society (ITG) (1990-1996)

Elected peer reviewer for the German Research Foundation on digital communications systems (1995-2000)

President of the Information Theory Society, IEEE (2001)

Member of the Bavarian Academy of Sciences and Humanities and chair of the "forum technology" committee (2002)

Member of the National Academy of Science and Engineering (acatech) (since 2003)

Member of the board of directors of the "Internationales Begegnungszentrum der Wissenschaft München" (since 2005)

Chair of the awards committee Vodafone Foundation (2000-2009)

Member of the academic advisory board of DOCOMO Eurolabs (Communications Laboratories Europe GmbH) (2007-2010)

Member of the academic advisory council of Munich Aerospace (since 2011)

Member of the board of directors of the Eduard Rhein Foundation (2006-2012)

Erich Regener Prize from the German Test and Research Institute for Aviation and Space Flight (DFVLR) (1981)

Otto Lilienthal Prize (1985)

Fellow of the IEEE (1992)

International E.H. Armstrong Award from the IEEE Communications Society (1996)

Heinz Meier-Leibnitz Medal from TUM (2003)

Alexander Graham Bell Medal from the IEEE (2003)

Honorary doctorate from the University of Erlangen-Nuremberg (2006)

Honorary ring from the Association for Electrical, Electronic and Information Technologies (VDE) (2006)

Science Prize from the Information Technology Society (ITG) (2014)

Prof. Dr.-Ing. Dr.-Ing. E.h.
Joachim Heinzl

Former professor of microfabrication technology and microtechnology
born September 6, 1940



Before Joachim Heinzl moved to TUM, he began his career path at Siemens, where he was professional head of his division in the central laboratory. During his time in the industry, he was responsible for the development of mechanical printers, punched tape and magnetic tape machinery, dot matrix printers and non-mechanical printing techniques. He developed the drop-on-demand inkjet printer, starting from the original idea through to the end of series production of the first commercially available inkjet printer Siemens PT80. As a scientist, Joachim Heinzl became internationally known through his ground-breaking research in microsystems technology (or micro-electro-mechanical systems, MEMS). From 1998 to 2000 he was the spokesperson of the Microsystems Technology research association. His areas of research included, in particular, low-noise aerostatic bearings, ultra precision processing and the laser measurement technology. The development of stepper motors and servo drive technology – in collaboration with other colleagues – indicated the large extent of his scientific interests. Together with Chinese guest lecturers and German Sinologists, he developed an intelligent text system for the Chinese language, which was included in the computer systems that Siemens AG supplied to the People’s Republic of China in 1987. Joachim Heinzl is a perfect example of someone successful both as a teacher and a researcher, who is able to bring his practical academic efforts into his professional practice as well as into the industry. He has more than 100 patent applications and patents to his name. As spokesperson for the advisory board of the Munich Business Plan Competition from 1998 to 2005, he ensured that good ideas could be trans-formed into technical innovations. Since his retirement, Joachim Heinzl has been serving TUM as a member of the board of trustees at Munich Aerospace as well as in IMETUM’s academic advisory council. He also reports on appeals proceedings and the mentor program at the TUM: Young Academy.

drop-on-demand inkjet printing
laser measurement technology microsystems
technology air bearing technology
rapid prototyping patents ultra-precision processing

Vice president of TUM (1995-2002)

Deputy chair of the Akkreditierungsverbund für Ingenieurstudiengänge (accreditation association for degree programs in engineering) (AVI) and Akkreditierungsagentur für Studiengänge der Ingenieurwissenschaft und der Informatik (accreditation agency for degree programs in engineering and information technology) ASII (1998-2002)

Member of the National Academy of Science and Engineering (acatech) (2003)

Academic director of the Hanser Verlag’s magazine F&M (1979-2005)

Spokesperson for the “Arbeitsgemeinschaft der Technischen Hochschulen und Technischen Universitäten in Deutschland” (ARGE TU/TH) (1995-2000)

Chair of ARGE TU/TH (1997-2005)

Deputy ombudsman of TUM (1997-2005)

Honorary member of the Academic Mechanical and Electrical Engineering Association (AMIV) (2005)

Tutor for the German Research Foundation (1999-2006)

International member of the National Academy of Engineering (NAE), Washington, DC, USA (2007)

Member of the board of directors of Voxeljet AG (since 2013)

Badge of Honor from the Association of German Engineers (VDI) (1994)

First prize in the German national Start-Up Competition as co-founder of the company Aerolas, together with M. Muth and Dr B. Schulz (1997)

Third prize in the German national Start-Up Competition as co-founder of the company Generis, together with Dr I. Ederer and R. Höchsmann (1999)

Heinz Maier-Leibnitz Medal from TUM (2002)

Aachen and Munich Prize for Technique and Applied Natural Sciences (2003)

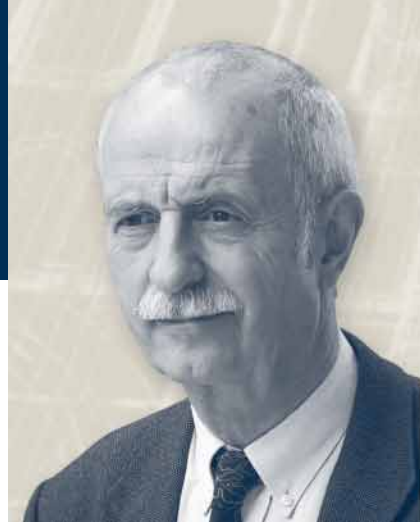
Honorary doctorate from the University of Hanover (2006)

German Federal Cross of Merit (2009)

1960-1965	Studies in general mechanical engineering, TH Munich
1967	Supplementary exams for the intermediate diploma in electrical engineering, TH Munich
1968	Development engineer at Siemens, central laboratory
1970	Doctorate in electronic acoustics, TUM
1975	Appointment to the University of Duisburg
1975-1979	Chief scientific adviser at Siemens' central laboratory
1979-2005	Professor of microfabrication technology and microtechnology, TUM
2006-2012	President of the Bavarian Research Foundation

Prof. Dr. (Univ. Rom) Dr. h.c. Dipl.Ing. Architekt BDA
Thomas Herzog

Former professor of building technology
born August 3, 1941



TUM Department of Architecture



Thomas Herzog is not only an internationally successful architect but also a brilliant academic. The experimental work he does in his architectural practice with his colleagues from various disciplines – from architectural engineering to solar technology – is the basis of his special method of architectural creation. His buildings are amongst the classics of recent architectural history: for example, the construction of the glass roof of the Design Center in Linz with its retroreflective light grid, or the Expodach (expo roof) at the World Fair in Hanover. In the planning and development of building envelopes, Thomas Herzog demonstrated how to make useful, sustainable structures contextual and adaptable through interdisciplinary research. These buildings brought him international fame. In collaboration with environmental and light designers, structural engineers or the Fraunhofer Institute for solar energy systems, he develops building envelopes in which all of the subsystems, from the frame to structural mechanics, are integrated; that can react with flexibility; and the energy economy of which can be regulated like an open system. From 1982 to 1996, Thomas Herzog was active in research and development work for the European Commission in Brussels. He established a technical center in the Department of Architecture at TUM that significantly improved the academic quality of the education in architecture. Thomas Herzog has a particular interest in the use of modern, high-tech materials and the optimal supply of energy from environmentally friendly energy sources. He has received numerous honors and awards for his buildings. He is also the author and editor of textbooks and monographs published across the world, as well as serving as president of the jury for the International Prize for Sustainable Architecture since 2006.

Graham Professor, University of Pennsylvania, USA (2003)

Guest professor at the Royal Academy of Copenhagen, Denmark (2004); École Polytechnique Fédérale de Lausanne, Switzerland (several times); Tsinghua University, Beijing, China (since 2003)

1960-1965	Studies in architecture, TH Munich
1971-1972	Awarded fellowship at the Deutsche Akademie Rom Villa Massimo, Rome, Italy
since 1971	Architectural partners practice, Stuttgart/Munich
1972	Doctorate in architecture, La Sapienza University, Rome
1973-1986	University professor of design and product development, Gesamthochschule Kassel
1986-1993	Professor of design and building technology, TH Darmstadt
1993-2006	Professor of design and building construction II; subsequently building technology, Institute for Architectural Design and Building Technology, TUM

construction engineering sustainability
energy supply architecture environment
building envelope art

Member of the Academy of Arts (Berlin); Académie d'Architecture (Paris, France); Bavarian Academy of Fine Arts (Munich); Russian Academy of Arts and Sciences (St Petersburg, Russia); as well as the International Academy of Architecture (Sofia, Bulgaria)

Chair of the 4th European Conference for Solar Energy in Architecture and Urban Planning (1996)

Commissioner General of the Federal Republic of Germany for the international Venice Biennale of Architecture, Italy (2000)

Member of the academic committee of the XX. and XXI. World Congress of Architecture of the International Union of Architects, Beijing, China (1999), Berlin (2002)

Member of the board of directors, PLEA community services, Vancouver, Canada (1994-2006)

Honorary member of the Società Italiana della Tecnologia dell'Architettura (2010)

Peer reviewer for the German Research Foundation (2000-2005), and trustee for the Fraunhofer Society's Institute for Solar Energy Systems (until 2011)

Mies van der Rohe Award (1981)

Gold medal from the Association of German Architects (BDA) (1993)

Auguste Perret Prize from the International Union of Architects (1996)

Leo von Klenze Medal from the Supreme Building Authority of the Bavarian State Ministry (1998)

Den Grønne Nål from the Architects' Association of Denmark (1998)

Grande médaille d'or from the Académie d'Architecture (1998)

Fritz-Schuhmacher-Prize for Architecture (1999)

Heinz Maier-Leibnitz Medal from TUM (2005)

European Award for Architecture and Technology (2006)

Honorary doctorate from the University of Ferrara, Italy (2007)

International Architecture Award, Chicago Athenaeum (2007)

Global Award for Sustainable Architecture, Cité de l'Architecture, Paris (2009)

Prof. Dr. rer. nat.
Bertold Hock

Former professor of cell biology
born September 19, 1939



Bertold Hock investigated developmental processes in plants and fungi during the first part of his 40-year academic career. This includes the phytochrome-directed development of seedlings and the light-induced transition of plant glyoxysomes (cell organelles in which lipid metabolism is taking place) into peroxisomes (cell organelles in which photorespiration is taking place). Furthermore, morphogenesis of fungal fruiting bodies was a focus of his interest. His participation in two aerospace experiments on the influence of weightlessness and space radiation on the development of fungi led to important findings, among them the perception of gravity by a dislocation of nuclei in the upper part of fruiting body stalks. During the second part of his career he extended his laboratory by an immuno-analytical division, initially for the production of polyclonal antibodies for immune-labeling plant proteins and surface antigens. The routine production of monoclonal antibodies finally enabled the selective analysis of low molecular weight analytes. Bertold Hock and his group became internationally recognized for developing ultrasensitive tests for the analysis of pesticides and environmental pollutants. Finally his research included biological effects analysis using receptor fragments as well as gene expression analysis to assess water contamination by estrogenic substances. He was significantly involved in developing the concept of bioresponse-linked instrumental analysis. Bertold Hock was involved in fundraising for more than 30 German Research Foundation (DFG) projects between 1972 and 2002. Together with international partners, he participated in nine EU projects from 1998 to 2008. Additionally, he has been involved in the German Ministry for Education and Research's project TripleLux, which examines the effect of space flight conditions on human genes and the immune system by a new measurement system. Since 2010, Bertold Hock has been a mentor within the "TUM: Young Academy" mentoring program..

1958-1962	Studies in Biology and Chemistry, TH Stuttgart
1964	Diploma in Biology, University of Freiburg
1965	Doctorate in Biology, University of Freiburg
1965-1967	Postdoc, Purdue University (Lafayette, USA)
1967-1970	Research Assistant, University of Tübingen
1970	Habilitation in Biology, University of Tübingen
1970-1978	Associate Professor of Biochemistry of Morphogenesis, Ruhr-Universität Bochum
1978-2001	Chair of Botany, Department of Agriculture and Horticulture, TUM
2002-2006	Chair of Cell Biology at the TUM School of Life Sciences



Bioanalysis Monoclonal Antibodies
Biological Effect Tests Bioresponse-
linked Instrumental Analysis Space Research

Visiting postdoctoral researcher at Purdue University, USA (1965-1967)

Visiting researcher at Washington State University, USA (1984)

Visiting researcher at the Department of Microbiology, Jawaharlal Nehru University, New Delhi, India (1991)

German Research Foundation project: Cloning and sequencing of glyoxysomal and mitochondrial malat-dehydrogenase in watermelons (1982-1987)

German Research Foundation project: Serological evidence of pesticides and their metabolites in the hydrologic cycle (1988-1992)

German Research Foundation project: Quantitative identification of non-extractable triazine residues in refractive organic acids in water with the help of ELISA (1993-1998)

EU Research Project EDEN: Endocrine disruptors: Exploring novel endpoints, exposure, low-dose and mixture effects in humans, aquatic wildlife and laboratory animals (2002-2007)

EU Research Project IMAGEMO: Development of a capacitance-based immunodetection analyzer for the assay of genetically modified organisms in food (2002-2007)

EU Research Project ELISHA: Electro-immunointerfaces and surface nanobiotechnology: A heterodoxical approach (2003-2008)

Chair of the Munich work group "Atmospheric pollutants" in the German Research Center for Environmental Health (GSF) (1992-1998)

Spokesperson for the work group "Immunoassays for the detection of pesticides" at the German Chemical Society (GDCh) (1992-1998) and the German Institute for Standardization (DIN), DIN-Normenausschuss Wasserwesen (NAW) (1992-1998)

Spokesperson for the work group "Standardization of immunoassays for pesticides" at the International Organization for Standardization (ISO) (1992-1998)

Spokesperson for the German Research Foundation's research group "Immunoassays für den Nachweis von Pestiziden" (immunoassays for the detection of pesticides) (1988-1993)

Spokesperson for the work group "Wirkungsbezogene Analytik" at the GDCh (1998-2002)

Spokesperson for the work group "Endokrine Wirkungen" of the German Institute for Standardization (DIN) (1998-2006)

Member of TUM: Young Academy's advisory board (since 2010)

Prof. Dr. med
Heinz Höfler

Director of the Institute for Pathology and Pathological Anatomy, TUM und the Institute for Pathology, Helmholtz-Zentrum Neuherberg, born January 7, 1949

Professor Höfler was the director of the Institute for Pathology and Pathological Anatomy at TUM and director of the Institute for Pathology at the Helmholtz Centre in Neuherberg. He made the TU Institute what it is today, bringing it up to date in the areas of medical care, research and teaching, as well as playing a leading role in the modern orientation of the TUM Faculty of Medicine. Thanks to Professor Höfler, the Institute for Pathology at TUM took on a leading role amongst the pathological institutes in Europe. Over the years, Professor Höfler has been a member of the TUM academic senate, a dean of the TUM Faculty of Medicine, and the president of the scientific advisory board of the Research Centre for Environmental Health (GSF, Helmholtz Zentrum München). He is currently active as a member of the scientific advisory board of numerous foundations, and works as an expert for the German Research Foundation and German Cancer Aid. He was also the president of the German Society for Pathology, the Society of Histo-chemistry, as well as several international expert associations, and editor-in-chief of the journal "Virchows Archiv". Since 2000, Professor Höfler has been the vice-chair of the DAP (Deutsches Akkreditierungssystem Prüfwesen GmbH) sector committee for pathology and is, in this capacity, responsible for the guidelines and implementation of accreditation at pathological institutes.



- GSF chairman of the scientific-technical advisory board (until 2007: Research Centre for Environmental Health)
- Member of the German Academy for Natural Sciences "Leopoldina" (since 1999)
- Vice chairman of the scientific advisory board of the Wilhelm-Sander-Foundation (since 2007)
- Chairman of the scientific advisory board of the Wlaler Schulz Foundation (since 2010)
- Honorary member of the Austrian Society of Pathology

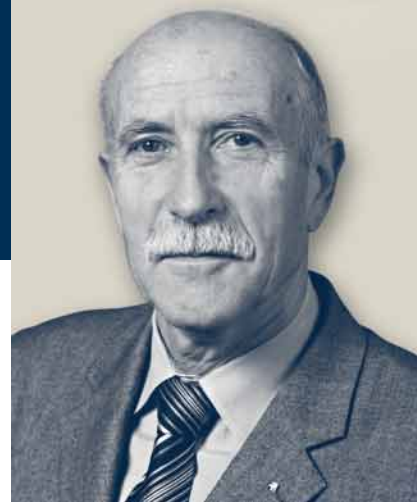
- Editor of the Journal "Virchows Archiv" (since 2001)

1967-1974	Medical Degree, Karl-Franzens-Universität Graz, Austria
1981	Habilitation and medical specialist certification, Graz University, Austria
1986	Head of the Department of Oncology and Cell Biology, Pathological Institute, Graz University, Austria
1987	Appointment as an outstanding university professor for pathology, Graz University, Austria
1988-2015	Director of the Institute for Pathology at the Helmholtz-Centre Neuherberg/Munich
1989-2015	Director and professor at the Institute for Pathology and Pathological Anatomy at the TUM
1997-1999	Dean of the Faculty of Medicine, TUM

- Hoechst-Prize for Medicine (1986, 1988 and 1991)
- Sandoz-Prize for Medicine (1987)
- A. Wewalka-Prize by the Austrian Society for Gastroenterology (1990)
- Roll of Honor of the International Union against Cancer (UICC) (1997)
- Alexis Carrel Prize for Vascular Surgery (1998)
- Austrian Cross of Honor for Science and Art of the first order (2004)

Prof. Dr.-Ing.
Bernd-Robert Höhn

Former professor of mechanism design
born April 24, 1946



Bernd-Robert Höhn's concentrated his work on mechanical propulsion technology with a special focus on gear trains and cogwheels. Throughout his career, he has continually sought to expand and tested core areas of mechanical propulsion through exhaustive, practical research, and particularly to develop a continuously variable transmission and mechatronic propulsion drivetrain, for example in the development of hybrid propulsion for cars. Within the German Research Foundation (DFG) Collaborative Research Center (SFB) 365, a car with hybrid propulsion designed to reduce fuel consumption was built and tested under his leadership. Bernd-Robert Höhn focused his work on discovering potential ways of saving energy and putting them holistically into practice by optimizing the effectiveness of the entire propulsion drivetrain – something that would not have been feasible when taking only the individual components such as gear trains or CI engines into consideration. Together with his team of often more than 50 scientists, he was very successfully able to attract third-party funding. Bernd-Robert Höhn arranged and hosted many academic conventions in the area of propulsion and has been an active member of the Association of German Engineers (VDI) for more than 30 years. He belongs to many technological/academic societies and is a leader in international engineering standards. His ground-breaking work in the area of drivetrain technology has brought him both national and international recognition as a researcher and engineer.

propulsion technology hybrid propulsion
fuel economy standardisation
cogwheel weight-bearing capacity calculation

- Member of the National Academy of Science and Engineering (acatech) (since 2006)
- Member of the executive committee and chair of the academic advisory board of the VDI (2003-2009)
- Member of the academic council of the German Federation of Industrial Research Associations (AIF), Cologne (2007-2014)
- Member of the Wissenschaftliche Gesellschaft für Produktentwicklung (WiGeP), Paderborn
- Member of the American Gear Manufacturers Association (AGMA)
- Deputy spokesperson of the German Research Foundation's Review Board 402: Mechanics and Constructive Mechanical Engineering (2004-2007)
- Coordinator of the German Research Foundation Priority Program (SPP) 1551: Resource efficient constructional elements (since 2011)
- Head of working groups WG6 and WG15 (carrying capacity of gear wheels) for ISO/TC 60
- Head of the German Institute for Standardization (DIN) working group "Zahnräder und Getriebe"

1965-1970	Study of mechanical engineering, Technical University Darmstadt
1978	Doctorate in mechanical engineering, Technical University Darmstadt
1979-1982	Propulsion design engineer, Audi AG
1982-1989	Head of Transmission Development Department and the Approach of Automatic Transmission, Audi AG
1989-2011	Professor of mechanism design, TUM

- Fritz Kesselring Honorary Medal of the VDI (1999)
- Badge of Honor from VDI (2003)
- Ernst-Blickle Award, SEW Eurodrive Foundation (2007)
- Honorary membership of the VDI (2013)

Prof. Dr.-Ing.
Hartmut Hoffmann

Former professor of forming and casting technology
born May 24, 1942



Hartmut Hoffmann conducted research in the area of metalforming and casting, and his motto has always been to tackle challenges with new, unconventional approaches. His department focused on metalforming with a particular emphasis on sheet metal deformation of high-tensile materials and light weight materials. In the area of casting, he specialized in the continuous casting of non-ferrous metals, as well as the constrained virtual imaging of the entire casting process and material characterization, such as neutron imaging. With a team of up to 40 academics, Hartmut Hoffmann successfully attracted third-party funding for many years. More than 400 book and magazine publications, 40 patents and patent applications as well as more than 70 dissertations developed out of his research. He organized and hosted numerous academic conventions in production engineering. He was dean of the Department of Mechanical Engineering from 2001 to 2005, and director of the newly established company TUM International GmbH until 2010. He is a member of many technological/academic academies and societies and continues to be active as a consultant for national and international research funding institutions. He also serves on the board of management, board of directors and as member of the advisory board of many organizations, foundations and companies.

metalforming deformation technology
sheet metal manufacturing metal characterization
continuous casting light weight construction simulation

Visiting professor, University of Nanjing, China (1986, 1988)

Member (since 1995) and chair (2007-2010) of the Working Group on Forming Technology

Member of the German Academic Society for Production Engineering (WGP) (since 1998)

Member of the International Academy for Production Engineering (CIRP) (since 2000)

Member of the National Academy of Science and Engineering (acatech) (since 2002)

Member of the board of management and executive committee of the German Foundrymen Association (VDG) (2002-2012)

Manager at the Association of German Engineers (VDI), Upper Bavaria and Austria (since 2007)

Member of the research advisory board of the European Research Association for Sheet Metal Working (since 2008)

Member of the board of management of the Agency for Quality Assurance through Accreditation of Study Programs (AQAS) (2003-2007)

Member of the academic advisory board of the Free University of Bozen-Bolzano (since 2011)

Assessor for the Austrian Research Promotion Agency (FFG) (since 2011)

Assessor for the Austrian Federal Ministry for Transport, Innovation and Technology (BMVIT) (since 2012)

Member of the judging panel for awards and distinctions at the Fraunhofer society (since 2004)

Judge of "Jugend forscht" finalists, Bavaria (2007-2011)

Founder (1998) and director (since 2011) of the Entwicklungsgesellschaft für Umformtechnik und Gießereiwesen mbH

Member of the advisory board of the Schuler AG, Göppingen (2003-2013)

Member of the advisory board of the Arnold Umformtechnik GmbH & Co. KG, Forchtenberg-Ernsbach (2013)

Member of the advisory board of the Hubert Schlieckmann GmbH, Marienfeld (since 2013)

1961-1967	Study of mechanical engineering and manufacturing, Technische Universität Berlin
1968-1978	Employee at L. Schuler GmbH, Göppingen – position at end of employment: head of department and executive
1973	Doctorate, Technical University of Berlin
1977-1994	Professor of metalforming and machine tool technology, Heilbronn University of Applied Sciences, continued employment as executive at Schuler in the research department
1981	Appointment to University of Duisburg
1994-2011	Professor of metalforming and casting technology and head of the Institute for Materials and Processing, TUM

Medal of Honor for outstanding achievement in his degree, TU Berlin (1968)
Steel Innovation Prize (2009)

Prof. Dr. rer. nat. Dr. h.c. mult.
Karl-Heinz Hoffmann

Former professor of applied mathematics
 born July 18, 1939



Karl-Heinz Hoffmann made exceptional contributions to applied mathematics and mathematical modeling. His work concerned itself with analysis, numerics and the optimization of problems regarding thermomechanics and fluid mechanics, particularly for the modeling of phase transitions. The work also has been and continues to be in close contact with developments in continuous casting and crystal pulling and, since the middle of the 1990s, with developments in biology and nanotechnology, particularly concerning usage in medicine. His numerous stays as visiting researcher in many European countries, Russia, the USA, Canada, South America, China and Australia demonstrate his international renown. His important achievements in business management manifest themselves in, for example, his decisive dedication to the conception and establishment of the natural sciences at the University of Augsburg in the 1980s and the establishment of the caesar international and interdisciplinary research center in Bonn in 1998. Additionally, he worked in numerous academic organization and foundations. From 1990 to 1996, he was a member of the German Council of Science and Humanities; from 1994 to 1996 he served as its chair. In 1998, he was appointed to the selection committee of the Alfried Krupp von Bohlen und Halbach Foundation. Since 2006, he has been taking part in the German Research Foundation's (DFG) Collaborative Research Center (SFB) "Optimal control of cryopreservation of cells and tissues". Karl-Heinz Hoffmann was spokesperson for TUM's Emeriti of Excellence program from 2006 to 2011, and has been president of the Bavarian Academy of Sciences and Humanities since 2011.

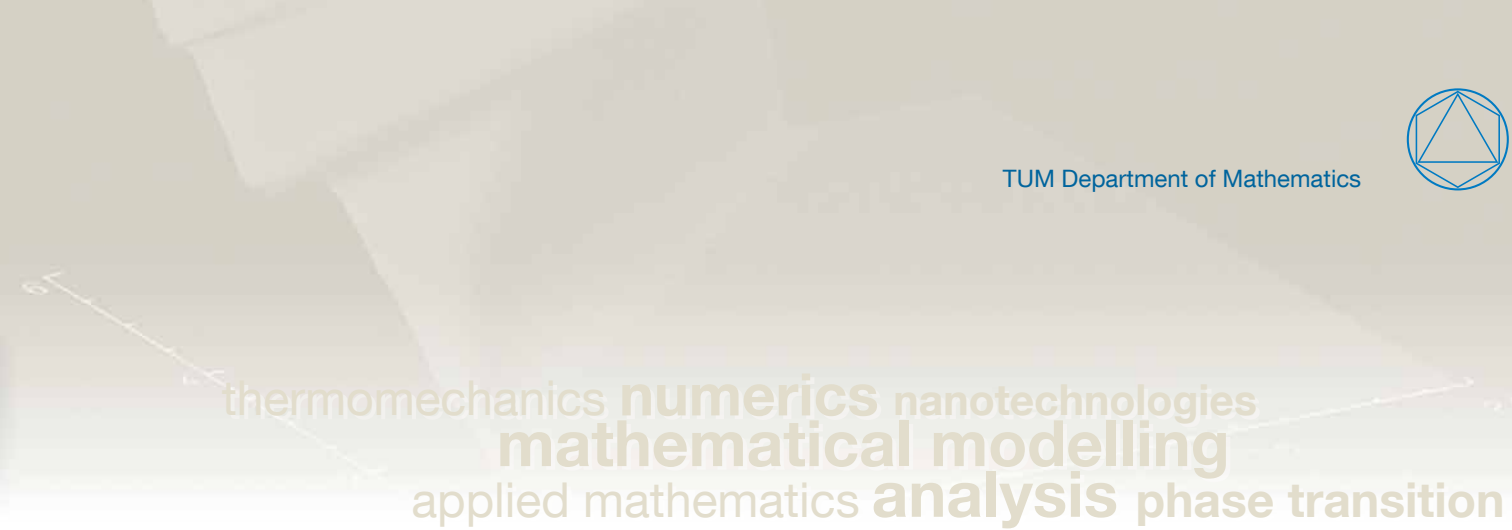
Member of the academic advisory board of the Weierstrass Institute for Applied Analysis and Stochastics (WIAS) – an institution of the Leibniz Association, Berlin

Vice President of the Universität Augsburg (1984-1986)

Member of the European Academy of Sciences and Arts (Academia Scientiarum et Artium Europaea), Salzburg (1989)

Member of the German National Academy of Sciences Leopoldina (1995)

1960-1965	Studies in mathematics and physics, universities of Marburg and Freiburg
1968	Doctorate in mathematics, LMU, Munich
1975-1981	Professor of mathematics, Free University of Berlin
1978	Appointment to the University of Marburg
1981-1991	Professor of mathematics, University of Augsburg
1992-2007	Professor of applied mathematics, TUM
since 2011	President of the Bavarian Academy of Sciences and Humanities, Munich



- Member (1990-1996) and Chairperson (1994-1996) of the German Council of Sciences and Humanities
- Member of the Bavarian academy of science and humanities (1997)
- Member of the selection committee of the Krupp Foundation (since 1998)
- Member of the Bavarian Consortium for High Performance Scientific Computing (FORTWIHR) (1992-1998)
- Spokesperson for Collaborative Research Center (SFB) 438: Mathematical modeling, simulation and verification in material-oriented processing and intelligent systems (1997-1999)
- President of the Association of German Mathematicians (DMV) (1997-1999)
- Member of the German Council of Science and Humanities (1990-1996)
- Member of the Central Selection Committee of the Alexander von Humboldt Foundation (1998-2000)
- Member of the board of trustees of the Free University of Berlin (since 2001)
- Academic advisory council AGORA, University of Jyväskylä, Finland (since 2001)
- Chairperson of the German Accreditation Council (DAR) (1999-2003)
- Member of the "Landeshochschulrat Brandenburg" (2001-2004)
- Member of the Minerva Centers committee of the Max Planck Society (1997-2005)
- Founding director of the Caesar Foundation, Center of Advanced European Studies and Research, Bonn (1998-2005)
- Chair of the academic council of the Interdisciplinary Center for Scientific Computing (IWR), Heidelberg University (1996-2006)
- Member of the technology advisory committee of Berlin (2000-2006)
- Member of the Accademia Nazionale Virgiliana, Mantua, Italy (since 2012)

- Karl Heinz Beckurts Prize (1990)
- Gottfried Wilhelm Leibniz Prize from the German Research Foundation (1991)
- Honorary doctorate from the TU Bergakademie Freiberg, Saxony (1999)
- Honorary doctorate from the University of Augsburg (2001)
- Alwin-Walther-Medal from the TU Darmstadt (2002)

Prof. Dr. med.
Franz Hofmann

Former professor of pharmacology and toxicology
born May 21, 1942



Franz Hofmann's research focuses on the structure and function of protein kinases and stretch-activated calcium and ion channels. A two-and-a-half-year interval spent in the laboratory of future Nobel Prize winner Edwin G Krebs in the USA strongly influenced the beginning of his later career. With his working group he was successful in making a series of important discoveries concerning the functioning of the intercellular neurotransmitters that control cellular functions and organ activity. Using biochemical, molecular biological and physiological methods, Franz Hofmann elucidated important cellular controlling functions and analyzed the function network of the neurotransmitters in the cells, their development and their effects. He did pioneering work in the area of the cAMP and cGMP protein kinase. He was also the first to explain the structure of several CA⁺⁺ channel proteins in muscles and the heart. His research has wielded considerable influence in current heart and muscle physiology, extending even to general physiology. He is internationally regarded as one of the leading researchers in this area and receives funding from organizations such as the German Federal Ministry of Education and Research, the Chemical Industry Fund, the Volkswagen Foundation as well as the European Union. Hofmann is the co-author of many pharmacological textbooks and co-publisher of numerous academic journals. He is an active participant in the grants committees of the German Research Foundation (DFG), the Wilhelm Sander Foundation and the Feldberg Foundation. Numerous awards and his extensive international acclaim attest to the exceptional quality of his research, which he still continues to pursue even after many years spent in retirement.

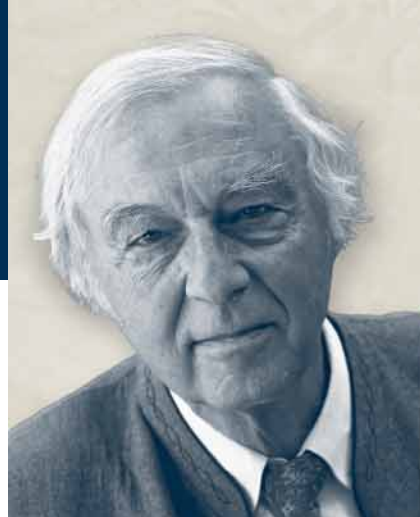
pharmacology molecular biology
calcium channel proteins physiology
intercellular semiochemicals cell activation
cardiovascular function

- Member of the Wilhelm Sander Foundation (since 1991)
- Honorary professor of Tongji Medical University, Wuhan, China (1998)
- Member of the Bavarian Academy of Sciences and Humanities (BAdW) (since 2001)
- Member of the German National Academy of Sciences Leopoldina (since 2007)
- Member of the Academia Europaea (since 2003)
- Honorary professor of the Shanghai Institute of Materia Medica, Chinese Academy of Sciences (2004)
- Senator of the pharmacology as well as the physiology and pharmacology divisions of the Leopoldina (since 2007)
- Member and chair (from 2002) of the board of trustees of the University Leipzig (2000-2008)
- Director (2007-2010) and chairman of the board of directors (2010-2012) of the Feldberg Foundation

- Spokesperson (1990) and deputy spokesperson (1986-1989) for the German Research Foundation (DFG) Collaborative Research Center (SFB) 246: Protein phosphorylation and intracellular control of membrane processes
- Spokesperson for the DFG's Collaborative Research Center (SFB) 391: Mechanisms of rapid cell activation (1995-2007)
- Spokesperson for the DFG's research unit FOR 923: Molecular dissection of cardiovascular functions (2007-2010)

1962-1968	Study of medicine, universities of Heidelberg, Munich and Berlin
1968	Doctorate, Heidelberg University
1973-1975	Assistant at the University of California Medical School, Davis, CA, USA
1975-1980	Assistant at the Pharmacological Institute, Heidelberg University
1981-1984	Professor of pharmacology, Heidelberg University
1985-1990	Professor of physiological chemistry, Saarland University
1992-1993	Founding director of the Leibniz Research Institute for Molecular Pharmacology, Berlin
1990-2008	Professor of pharmacology and toxicology, TUM

- Max Planck Research Award (2002)
- Aschoff Prize, Medical Society of Freiburg (2002)
- Feldberg Award (2003)
- Officer's Cross of the Federal Republic of Germany (2004)
- Harry van Dyke Award, Columbia University, New York, (2006)
- Bavarian Order of Merit (2008)



In 1988, Robert Huber received the highest honor the world of science has to bestow: together with Hartmut Michel and Johann Dieisenhofer, he was awarded the Nobel Prize in Chemistry “for the determination of the three-dimensional structure of a photosynthetic reaction center”. He studied, did his doctorate and post-doctoral qualification as professor in chemistry at the TUM, to which he remained attached as director of the Max Planck Institute for Biochemistry. He had already begun to focus on crystallography for his dissertation, and he had established a protein crystallography laboratory in the early 1970s. Over the years, with the help of X-ray crystallography, he was able to demonstrate the structure of numerous proteins and protein complexes, including protease and their natural and synthetic inhibitors; metalloenzymes; immune system proteins; protein hormones and their receptors; protein kinases; amino acid biosynthesis enzymes; and energy and electron transfer proteins. Moreover, he developed and improved new devices and methods now standard in X-ray structural analysis – for example, the Patterson Method, graphic methods and the improvement of protein crystallization. Robert Huber is guest professor at the Universitat Autònoma de Barcelona, the University of Duisburg-Essen, Cardiff University in the UK and Seoul National University in Korea. He is also co-founder of the biotech companies Proteros and Supremol and a member of the academic advisory board of the Peter and Traudl Engelhorn Stiftung as well as several pharmaceutical companies. Robert Huber continues to conduct research at the Max Planck Institute of Biochemistry up to the present day.

Member of the German Chemical Society

Member of the Order Pour le Mérite for Sciences and Arts

Member of the Bavarian Academy of Sciences and Humanities (BAdW)

Member of the German National Academy of Sciences Leopoldina

Member of the Accademia Nazionale dei Lincei, Rome

Member of the European Academy of Arts, Sciences and Humanities

Associate fellow, Third World Academy of Sciences, Trieste

1960-1972	Study of chemistry, dissertation, post-doctoral professorial qualification, TUM
1972-2005	Academic member and director, Max Planck Institute for Biochemistry, Munich
since 1976	Professor, TUM
since 2005	Director emeritus, Max Planck Institute for Biochemistry, Munich

protein crystallography protein structural analysis
X-ray structure analysis **Patterson method**
three-dimensional structures

Foreign associate, National Academy of Sciences, USA

Fellow, American Academy of Microbiology

Foreign member of the Royal Society, London

Foreign fellow of the Indian National Science Academy, New Delhi

Foreign member of the Korean Academy of Science and Technology, Korea

Otto-Warburg-Medal, Society for Biochemistry and Molecular Biology (GBM) (1977)

Emil-von-Behring-Medal, University of Marburg (1982)

Keilin Medal, Biochemical Society, London (1987)

Nobel Prize in Chemistry (1988)

E. K. Frey - E. Werle Gedächtnismedaille (1989)

Sir Hans Krebs Medal, Federation of European Biochemical Societies, Dublin (1992)

Bavarian Maximilian Order for Science and Art (1993)

Linus Pauling Medal (1993/1994)

Max Tishler Prize, Harvard University, US (1997)

Max-Bergmann Medal, Max Bergmann Kreis for the promotion of peptide chemical research (1997)

Grand Cross of Merit of the Federal Republic of Germany (1997)

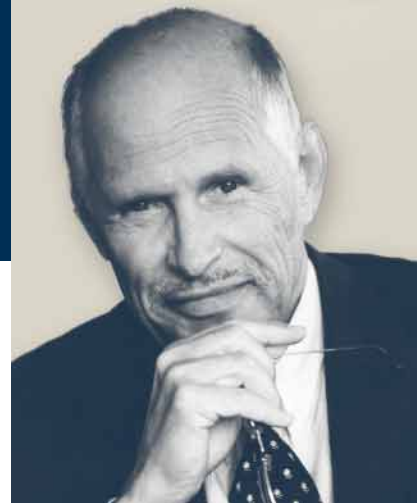
Premio Città di Firenze sulle Scienze Molecolari, Florence (2004)

Erice Prize – Premio Ettore Majorana (2009)

Honorary doctorates from the Université Catholique de Louvain, Belgium (1987); University of Ljubljana, Slovenia (1989); University of Rome Tor Vergata, Italy (1991); Universidade Nova de Lisboa, Portugal (2000); Universitat Autònoma de Barcelona, Spain (2000); Tsinghua University, Beijing, China (2003); Nagoya University, Japan (2008); Universidad de Buenos Aires, Argentina (2010); University of Vilnius, Lithuania (2011); Bulgarian Academy of Sciences, Sofia (2012), and the Universitatis Iagellonicae Cracoviensis, Poland (2014)

Prof. Dr.-Ing. Dr. h.c. mult.
Günter Kappler

Former professor of propulsion and director of the Department of Aerospace Engineering, born September 9, 1939



Günter Kappler was the professor of propulsion and director of the Department of Aerospace Engineering for almost 15 years. During this time he dedicated himself to fundamental research and oversaw the establishment of many testing facilities, including a gas turbine testing facility and one for combustors with flow velocities that could reach supersonic levels. Within his department, he developed a new kind of engine configuration that expanded on a core engine, from which a series of related engines could be derived. This invention was the basis of the BR700 engine series. Günter Kappler's definitive participation as the director of research and development facilitated the development of the BR710 and BR715 engines within the BR700 series for BMW RR GmbH in a joint venture between BMW AG and RR plc. The engines could then be marketed worldwide. This was in fact the first license given to a civil engine developed in Germany. From 1999 to 2002, Günter Kappler was head of development at Fairchild-Dornier GmbH and oversaw the aircraft Do728 all the way to the point of its roll-out. As CEO and managing director of EPI, he developed – alongside corporate partners RR, Snecma, MTU and TIP – Europe's biggest turboprop engine: the TP400-D6. Since 2008, Günter Kappler has been the technical director of Thielert Aircraft Engines and in charge of airworthiness for its successor company Technify Motors GmbH. He maintained close ties with TUM's university life throughout his time within the industry.

flight propulsion engine regulation and supervision
 supersonic combustion core engine
 turboprop engine
 high-pressure/high-temperature technology

- Member of the Association of German Engineers (VDI) (since 1963)
- Member and fellow of the American Society of Mechanical Engineers (ASME) (since 1967)
- Member of the technology forum for new transport systems for aeronautical and astronautical engineering of the German Federal Ministry of Research and Technology (BMFT) – scientific commission AZURA (1987-1988)
- Member of the German executive committee for hypersonic technology – BMFT-SÄNGER-PROJEKT (1988-1990)
- Member of the board of management of the German aerospace research programs LuFo I and LuFo II (1990-1996); member of the assessment committee for LuFo III and LuFo V (2008)
- Member of the advisory council of the German Aerospace Industries Association (1990-1997)
- Member of the senate of the German Aerospace Centre (DLR) (1996-2001)
- Chair of the scientific assessment committee of aerospace technology of the Helmholtz Association, Bonn (1996-2001)
- Member of the senate of the Fraunhofer-Gesellschaft (1998-2002)
- Member of the German Society for Aeronautics and Astronautics (DGLR) and its senate (1996-2005)
- Consultant to the German Federal Ministry of Economics and Technology regarding the aeronautical and astronautical industry (2005-2008)

1957-1966	Study of mechanical engineering, Polytechnic University of Timisoara, Romania; TU Darmstadt, Germany; University of Pittsburgh, USA
1967-1970	Academic assistant and doctoral studies, University of Karlsruhe
1971-1981	Development engineer, later chief head of the Component Design and Test Department, MTU Munich
1981-1982	Managing director of research and development, AVL, Graz
1982-1995	Professor of propulsion and director of the Department of Aerospace Engineering, TUM
1990-1999	Member of the executive board of BMW Rolls Royce GmbH, Oberursel
1999-2002	Head of development and director of development of the Do728 aircraft, Fairchild-Dornier GmbH, Oberpfaffenhofen, Germany
2002-2005	Managing director of EPI Europrop International GmbH, Unterschleißheim/Madrid
2005-2008	Member of the A380 and A400 (among others) program testing team for the EADS
2008-2014	Managing director of technology and airworthiness at Thielert Aircraft Engines GmbH and its successor, Technify Motors GmbH
since 2015	Shareholder of the ETN Aerospace GmbH

- Honorary professor of the Beijing University of Aeronautics and Astronautics (Beijing University) (1996)
- German Federal Cross of Merit (1998)
- Honorary Needle from the German Society for Aeronautics and Astronautics (DGLR)
- Ernst Messerschmitt Medal from the German Society for Aeronautics and Astronautics (DGLR) (1999)
- Karl Heinz Beckurts Prize (2000)
- Honorary Needle from the Association of German Engineers (VDI) (2002)
- Gold Medal from the British Royal Aeronautical Society (2004)
- Honorary doctorate from the Polytechnic University of Bucharest, Romania (2005)
- Honorary doctorate from the University of the German Federal Armed Forces, Munich (2006)
- Otto-Lilienthal-Medal from the German Society for Aeronautics and Astronautics (DGLR) (2006)



The name Horst Kessler is most closely associated with “conformational analysis of peptides, in particular cyclical peptides”. In his work, Horst Kessler linked design to synthetic works, spectroscopic examination and molecular dynamics computations. These methods are now recognized as key processes for the development of new active substances. The question of directed influence of pharmacologically active conformation through ring formation led Horst Kessler to the field of cancer research. Some of the results of his basic research found their way into practice, such as the development of medicines to treat brain tumors or other cancers, the improvement of hip implants and early discovery and characterization of cancer metastases through molecular imaging. Horst Kessler contributed important methodological developments on nuclear magnetic resonance spectroscopy (NMR). In the last two decades, Horst Kessler applied these methods to proteins as well: for example, tumor suppressor protein p53 and its interaction partners as well as various heat shock proteins. His elucidation of terminal domains of spider silk protein, which explains the creation of extremely stable filament spun from the storage form, attracted great interest. He has received international recognition for his scientific and academic work.

Visiting professor at:

Dalhousie University, Halifax, Nova Scotia, Canada (1975)

University of Tokyo, Japan (1985)

Brittingham Guest Professorship, University of Wisconsin, USA (1988)

Technion, Haifa, Israel (1990)

Vista Chemical Company Regents Endowed Memorial Lectureship, University of Texas, USA (1997)

Lady Davis Professor, Hebrew University, Jerusalem, Israel (1998)

Establishment of the “Magnetische Resonanzspektroskopie” section within the German Chemical Society (GDCh) (1978); member (1978-1982) and chair (2001-2008) of its board of directors

1958-1963	Studies in chemistry at the universities of Leipzig and Tübingen
1966	Doctorate in chemistry, University of Tübingen
1970	Lecturer, University of Tübingen
1971-1988	Professor of organic chemistry, J.W. Goethe University, Frankfurt/Main
1989-2008	Chair of organic chemistry and biochemistry, TUM
since 2008	Carl von Linde Senior Fellow, Institute for Advanced Study, TUM

cyclical peptides conformational analysis
development of active agents
cancer research molecular imaging
nuclear magnetic resonance spectrography (NMR)

Establishment of the Magnetic Resonance Spectroscopy section within the GDCh (1978); member (1978-1982) and chair (2001-2008) of its board of directors

Formation and founding of the Bavarian NMR Center at TUM

Member of the Bavarian Academy of Sciences and Humanities (BAdW) (1996-2014)

Chairperson of the Max-Bergmann-Kreis (1991-1995), chair of the academic advisory council (1996-2001)

Member of the board of directors of the Medicinal Chemistry section of the GDCh (1995-2002)

Member of the German National Academy of Sciences Leopoldina (since 2002)

Peer reviewer for the German Research Foundation (DFG) (1996-2004)

Member (since 1996) and chair (1998-2005) of the board of trustees of the journal “Angewandte Chemie”

Honorary member of the Israel Chemical Society and the National Magnetic Resonance Society of India (2009)

Honorary member of the Magnetic Resonance Spectroscopy section of the GDCh (2010)

Secretary of the mathematic-natural sciences division of the Bavarian Academy of Sciences and Humanities

Otto Bayer Award, Bayer Foundation (1986)

Max Bergmann Medal for Peptide Chemistry (1988)

Emil-Fischer-Medal from the German Chemical Society (GDCh) (1997)

Max Planck Research Award (2001)

Vincent du Vigneaud Award from the American Peptide Society (2002)

Hans Herloff Inhoffen Prize from the GDCh (2002)

Honorary doctorate from the University of Leipzig (2002)

Philip Morris Research Award (2003)

Burkhardt-Helferich-Award for Bioorganic Chemistry (2005)

Josef Rudinger Award from the European Peptide Society (2008)

Akabori Memorial Award from the Japanese Peptide Society (2012)

Meienhofer Award (2013)

Murray Goodman Endowed Lectureship (2015)

Bruce Merrifield Award from the American Peptide Society (2015)

Prof. Dr. rer. nat.
Manfred Kleber

Former professor of theoretical physics
born March 19, 1942



TUM Department of Physics



Manfred Kleber started his academic career in the area of theoretical nuclear physics, later turning to questions in the field of atomic physics such as radiation problems in heavy ions physics. He focused on accelerator physics and developed a time-dependent optimization and variational method to determine electron-positron generation in batches between heavy atoms and heavy, high-energy and highly charged ions. Manfred Kleber took a particular interest in quantum mechanical tunneling dynamics that went beyond the boundaries of classical physics. His research focused on realistic 3-D tunneling and the tunneling time problem. At the same time, he conducted research on the interaction of light and matter and, most recently, on scanning tunneling microscope theory, the behavior of matter and matter waves in a strong laser field as well as the role of an electrical field in the quantum Hall effect. Manfred Kleber has an outstanding reputation in his academic fields. His decades of particular commitment to the further education of teachers and support of secondary schools is just as important. Even after reaching retirement, he continued and strengthened his work in these areas. He is an excellent ambassador for TUM in teaching and a support for the TUM School of Education, founded in 2009. He has been active as a mentor for particularly talented students in the TUM: Junge Akademie.

nuclear tunneling physics particle accelerator
scanning tunnelling microscope
quantum mechanics laser field heavy ions

Member of German Physical Society (DPG)

Member of the American Physical Society

Member of Friends and Sponsors of the TUM Department of Physics

Collaboration with the advanced study groups at the Max Planck Institute for the Physics of Complex Systems, Dresden (2008-2009)

Lecturer at the "TUM Schulcluster Berchtesgadener Land", since 2008

Member of the Bavarian Physics Committee for honoring excellent high school students with the Carl-von-Linde award, since 2000

Research residencies:

University of New Mexico, Albuquerque, New Mexico, USA

Weizmann Institute of Science, Israel

Texas A&M University, College Station, Texas, USA

Visiting professor, African Institute for Mathematical Sciences (AIMS), Muizenberg, South Africa (2007)

Section project head of German Research Foundation (DFG) priority program 470: "Modellmäßige Behandlung der Wechselwirkung von Atomen mit starken Laserfeldern" (1995-1998)

Section project head of DFG's Collaborative Research Center (SFB) 338: "Adsorption an Festkörperoberflächen" on the topic "Mechanismen für Elektron- und Atomtransfer im Rastertunnelmikroskop" (1989-2001)

Willis E. Lamb Award for Laser Science and Quantum Optics (2006)

1961-1966	Study of physics, TH Munich
1969	Doctorate in theoretical nuclear physics, TH Munich
1972-1973	Postdoctoral research, Lawrence Radiation Laboratory, Berkeley, California, USA
1973-1977	Academic assistant, Department of Physics, TUM
1977-1980	Professor of theoretical physics, University of Cologne
1980-2007	Professor of theoretical physics, TUM



Peter Latz is an example of the few people working in his profession who understood how to react to the increasingly complex challenges in landscape architecture and urban planning in the last few decades, and how to develop new forms of expression in the environmental design of their time. In teaching, he supported the idea of project-based studies from the beginning – a learning technique that is able to react to contemporary challenges quickly and confidently. From the beginning, he dedicated his particular interest in planning, teaching and research to an idea of ecological urban renewal that was theoretically and academically grounded, and by extension to issues concerning alternative environmental technologies: climate manipulation by passive solar energy, creating green roofs and façades, rainwater management and recycling. Since the beginning of the 1980s, Peter Latz’s work has focused on the reuse of redundant industrial areas, their rehabilitation and cultural use and reintegration. These were distilled into teaching, research and practical planning for a theory on the transformation of the post-industrial landscape. Peter Latz received international recognition for his theses on the planning process, the strategies for meeting contemporary socio-ecological demands in an aesthetically timeless style, as well as for his finished projects.

ecological urban renewal theory of
post-industrial landscape aesthetics
alternative environmental technology socio-cultural
project studies

Member of the Bavarian Chamber of Architects

Member of the Ordre des Architectes et des Ingénieurs-Conseils du Grand-Duché de Luxembourg

Member of the German Association of University Professors and Lecturers

Visiting professorships at:

Queensland University of Technology, Brisbane, Australia (2000)

Harvard University, Graduate School of Design, USA (2001)

Chung Yuan Christian University, Taiwan (2008)

University of Pennsylvania, School of Design, USA (since 2001)

Lecture engagements at exhibitions and publication of work in professional journals worldwide

1959-1964	Studies in landscape architecture, TUM-Weihenstephan
1965-1968	Continuing studies in urban development, RWTH Aachen
1965-1970	Freelance work at the planning practice Prof Kühn-Meurer, Aachen
since 1968	Practice of landscape architecture and planning, together with partners
1968-1973	Lecturer at the Limburgse Academie voor Bouwkunst, Maastricht, Netherlands
1970-1976	Practice of urban, landscape and systems planning in Aachen, together with partners
1973-1983	Professor of landscape architecture, Gesamthochschule/Universität Kassel
1976-1983	Research group of alternative technologies at the Gesamthochschule/Universität Kassel (AFA)
1983-2009	Chair of landscape architecture and planning, TUM

Prize from the Federation of German Landscape Architects (BDLA) (1989)

First Rosa Barba European Landscape Prize, Barcelona (2000)

Grande Médaille d’Urbanisme from the Académie d’Architecture, Paris (2001)

Place Planning Award from the Environmental Design Research Association (EDRA), Edmond, Oklahoma, USA

Green Good Design Award for “people” (2010)

Green Good Design Award for “urban planning/landscape architecture” (2009, 2010)

Architekturpreis Dachau and Dachauer Gestaltungspreis, together with Florian Nagler Architekten (2011)

International Architecture Award for his project “parco dora”, Turin. Project team included Latz + Partner, STS Bologna (2012)

Premio Architetture Rivelate for “parco dora” project, Turin. Project team included Latz + Partner, STS Bologna (2012)

Topos Landscape Award (2013)

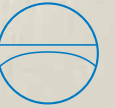
Friedrich-Ludwig-von Sckell-Ring of Honor from the Bavarian Academy of Fine Arts (2014)

**Prof. Assessor Dr.-Ing. Dipl.-Ing.
Holger Magel**

Former professor of land management and development
born May 3, 1944



TUM Department of Civil, Geo and Environmental Engineering



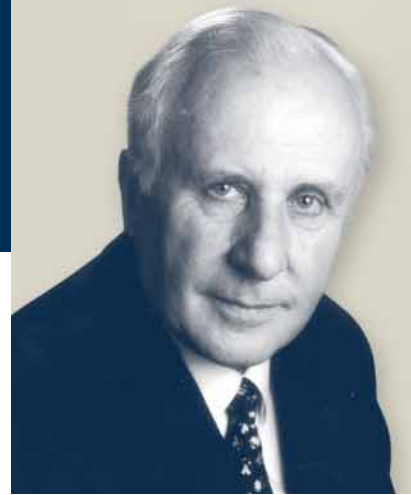
Before Holger Magel's appointment to TUM, where he became professor of land management and development and director of the Institut für Geodäsie, GIS und Landmanagement, he worked in the Bavarian government administration, where he ultimately became head of the Bavarian Administration of Rural Development. He founded the Bavarian village rezoning program and, through his initiatives in land-scape planning, also contributed to making rezoning a more landscape-friendly development enterprise in rural areas, satisfying the needs of both environmental protection and society. Holger Magel's research encompasses theories, methods and processes of sustainable village renewal, participative landscape planning, community development and land usage planning as well as theories and concepts of sustainable land management in an international context. In 2000, he founded the international master's program "Land management and land tenure in urban and rural areas". This enables future leaders, particularly from developing countries, to receive training to deal with the special challenges occasioned by urbanisation and structural problems in the rural areas of their home countries. In order to support a dialog between theoretical and practical application, Magel also founded the annual Munich Tage der Bodenordnung und Landentwicklung (land zoning and development conference), which has since become a forum for all of Germany. His strong commitment to his work has brought him national and international recognition and numerous important state, community and professional honors and distinctions. Magel also holds many honorary positions, such as president of the respected Bavarian Academy "Ländlicher Raum" (Rural Areas) and as member of the committee of Inquiry of "equal living conditions throughout Bavaria".

village renewal participative landscape
planning community development
land-use planning sustainable land
management

- Chair of the German federal-state working group on village renovation (1984-1995)
- EU representative for rural development in the former East German states (1992/1993)
- President of the Bavarian Academy for Rural Areas (since 1994)
- Spokesperson of the consortium of all the German Academies of Rural Areas (Arge LR) (from 2005)
- Honorary president (since 2007), formerly president of the International Federation of Surveyors (Fédération Internationale des Géomètres (FIG) (2002-2006)
- Member of the Bavarian Spatial Planning Advisory Board (since 1994) and the German Federal Advisory Board for Spatial Planning and Development (2010-2013)
- Chairman of the scientific working group Land and Real Estate Management of the German Geodetic Commission (DGK) at the Bavarian Academy of Science (2003-2009)
- Member of the "Civic Involvement" round table of the Bavarian Ministry of Social Affairs (since 2009)
- Member of the Academic Expert Panel of the National Research Center for Rural Planning and Development of the Chinese Ministry of Housing and Urban-Rural Development (since 2014)

1963-1968	Study of geodesy, TUM
1968-1971	Bavarian state training and assessor examination, 1971, top score
1972-1974	Rural land reallocation engineer, Upper and Lower Bavaria
1975-1977	Managing engineer in TUM's Department for Rural Development and Land Consolidation; doctorate achieved 1977
1978-1997	Head of department at the Bavarian Ministry of Food, Agriculture and Forestry, head of the Bavarian Administration of Rural Development
1986-1997	Assistant lecturer at UniBW and TUM, honorary professor at TUM
1998-2012	Professor of land management and development and head of TUM Center of Land, Water and Environmental Risk Management; head of the Institut für Geodäsie, GIS und Landmanagement, TUM

- Hans-Kudlich-Award, Ecosocial Forum Austria (1988) – the first non-Austrian to receive the award
- Silver Medal of Honor, Salzburg state (1988)
- Tiroler Adlerorden in Gold (1988)
- Bavarian Monument Protection Medal from the Bavarian State Ministry of Education, Science and the Arts (2000)
- Soldner Medal from the Bavarian State Ministry of Finance (2006)
- Bavarian Constitution Medal in silver awarded by the Bavarian State Parliament (2006)
- Bavarian Order of Merit (2007)
- Honorary citizenship of the Chinese model village Nan Zhang Lou, Shandong Province (2008)
- State Medal in Gold from the Bavarian Ministry of Food, Agriculture and Forestry (2009)
- Friedrich-Robert-Helmert-Gedenkmünze from the Society for Geodesy, Geoinformation and Land Management (DVW) (2009)
- Commander of the Royal Order of SOWATHARA, Kingdom of Cambodia (2010)
- Silver Commander's Cross for services to Lower Austria (2011)
- Technical adviser to the Council for Land Policy (2011) as well as the senior minister for land management – "Urban Planning and Construction" (2013) and awarded the title of "Excellency" (2013), Kingdom of Cambodia
- German Federal Officer's Cross of Merit (2013)



The themes of Franz Mayinger's academic work are manifold and are best described by his research into thermofluidynamics. At the beginning of his academic career, he focused his interest on transport processes, thereby opening up a broad spectrum of scientific interrogation, which in subsequent years allowed the departmental chair to grow continually and become one of the largest within the area of mechanical engineering at TUM. Franz Mayinger focused his work on substance values and heat transfer phenomena, particularly in regard to multiphase flow, like those that exist in reactors and chemical engineering plants. One of his specialities, which garnered him high academic recognition, was the early usage of optical measurement techniques that he had developed himself. During his eighteen years at the Technische Universität München, he received international renown for his chair in thermodynamics. In 1989, Franz Mayinger launched the Bayerischer Forschungsverbund Systemtechnik, within which research institutes and business companies work closely together. His lengthy service in academic organizations is particularly striking. From 1991 to 1997, he was a member of the German Council of Science and Humanities, and he is the founding dean of the Department of Applied Sciences and, currently, the chairperson of the university council of the University of Bayreuth. Franz Mayinger's research as well as his commitment to academic politics decisively influenced the development of the field of engineering in Germany.

Full member of the Braunschweigische Wissenschaftliche Gesellschaft (1976-1981)

Member of the senate and senior committee of the German Research Foundation (1979-1984)

Member of the Bavarian Academy of Sciences and Humanities (BAdW), category: mathematics-sciences (since 1989)

Member of the Reactor Security Commission (RSK) of the Federal German Ministry of the Interior, then the Ministry of the Environment; three years of which served as chair (1971-1992)

1951-1955	Studies in mechanical engineering, TH Munich
1961	Doctorate in thermodynamics, TH Munich
1962-1969	Director of the Research Department for Nuclear and Chemical Engineering at MAN, Nuremberg
1969-1981	Professor and director of the Institute of Process Engineering, TU Hanover
1973	Appointment to the Nuclear Research Center Karlsruhe
1973, 1977	Appointments to the University of Stuttgart
1981-1999	Professor of thermodynamics, TUM

multiphase flow heat transfer combustion
applied energy research process engineering
thermofluidynamics optical measurement techniques

Member of the scientific advisory board and the executive committee (chair 1990-1992) of the International Center of Heat and Mass Transfer (1987-1994)

Chair of the Hazardous Incident Commission of the Federal German Ministry of the Environment, Conservation and Reactor Safety (1992-1995)

Member of the board of directors of Noell (Preussag Group), (1980-1995)

Member of the German council of science and humanities (1991-1997)

Member of the Scientific-Technical Advisory Board (WTB) of the Bavarian state government (1993-1999)

Founding dean of the Department of Applied Natural Sciences at the University of Bayreuth (1995-1999)

Initiator and First Director of the Bavarian Elite Academy (1998-2002)

Member of the National Academy of Science and Engineering (acatech) (since 2002)

Chair of the board of trustees of the Bavarian Center for Applied Energy Research e. V. (ZAE) (2005-2008)

Chair of the university advisory council at the University of Bayreuth (since 1999-2009)

German Federal Officer's Cross of Merit (1990)

Max Jakob Memorial Award from the American Society for Mechanical Engineers (ASME) and the American Institution of Chemical Engineers (AIChE) (1991)

Honorary doctorate from the University of Hanover (1994)

Pro Meritis-Medal from the Bavarian Minister of Sciences, Research and Arts (1995)

Bavarian Order of Merit (1995)

Bavarian Environmental Award (1998)

Heinz Maier-Leibnitz Medal from TUM (1999)

Ernest Solvay Prize (2000)

Bavarian Maximilian Order for Science and Art (2001)

Honorary doctorate (2006) and honorary senator from the University of Bayreuth

NURETH Senior Fellow Award (2013)

Prof. Dr. rer. nat.

Maria-Elisabeth Michel-Beyerle

Former professor of physical chemistry

born August 20, 1935



TUM Department of Chemistry



Maria-Elisabeth Michel-Beyerle's academic work centers on charge transfer processes in the condensation phase – ranging from molecule crystals, electron-donor-acceptor-complex in solutions to biological systems, proteins and DNA. In 1976, she recognized the importance of radical pair recombination and its origins in hyperfine interactions in producing the first evidence of this effect by way of its characteristic dynamics within an external magnetic field. And, in so doing, she provided the foundations for a flourishing area in spin chemistry in the form of Mary Spectroscopy, named after her. Work on magnetic field-dependent electron transfer processes initially led to the observation of spin behavior on a timescale of picoseconds, which were three orders of magnitude faster than any hitherto observed. Fascinated by the function of the photosynthetic reaction center in the transformation of light into chemical energy, she initiated a very successful Collaborative Research Center (SFB) for the German Research Foundation (DFG) at the Technische Universität München entitled “Elementary processes of photosynthesis”. Within the scope of this Collaborative Research Center, they were able to identify very rapid transmembrane electron transfers and their energetics for the first time, as well as the spectacular discovery of the three-dimensional structure of the reaction center – for which Johann Deisenhofer, Robert Huber and Hartmut Michel received the Nobel Prize in Chemistry in 1988. In pursuing unconventional experimental starting points, it was possible to discover the crucial parameters that determine the mechanism for charge transfer on the basis of model studies of artificial donor-acceptor-systems in solutions. On this basis, Maria-Elisabeth Michel-Beyerle's work showed very early on that proton transfer in the stimulated state of green fluorescent protein (GFP) is the central process of this important genetic marker. Since November 2008, research in chromophore-protein and chromophore-DNA interactions continues to be conducted in the newly established “BioFemto-Labs” at Nanyang Technological University in Singapore.

radical pair recombination photosynthesis
spin chemistry physical chemistry
charge transfer processes
MARY Spectroscopy biological systems

Initiation and spokesperson of the Collaborative Research Center (SFB) 143: Elementary processes of photosynthesis (1981-1996)

Initiation and spokesperson of the Collaborative Research Center (SFB) 377: Photoionization and charge transfer in large molecules, clusters and in the condensation phase (1994-2000)

Coordinator of the international EU research program CiDNA (Control of assembly and charge transport dynamics of immobilized DNA), TUM (2003-2007)

Founding Director of the BioFemtoLabs at Nanyang Technological University, Singapore (2008)

CEO Scientific Program TUM Create, Singapore (2014)

1955-1957	Studies in Chemistry, University of Göttingen
1957	Visiting researcher at Columbia University, New York, USA, in the laboratory of Prof T. I. Taylor: Bursary from the Atomic Energy Commission
1957-1959	Studies in chemistry, LMU Munich
1964	Doctorate on “India's Electrochemistry”, TH Aachen
1965-1974	Research associate for Prof Heinz Gerischer, Institute for Physical Chemistry, TUM
1980-2000	Professor of Physical Chemistry, TUM
2008	Visiting Professor at Nanyang Technological University in Singapore

German Federal Cross of Merit (2000)
Bavarian Maximilian Order for Science and Art (2006)
Bavarian Constitution Medal (2009)
Heinz Maier-Leibnitz Medal from TUM (2013)



During his 12 years as a professor at TUM, Joachim Milberg established a strong foundation for the further development of computer integrated construction and production, thereby helping to enhance German industry's competitiveness. By introducing industrial robots and manufacturing technology to TUM's Institute for Machine Tools and Business Management (iwb), he was able to contribute an essential research emphasis to its work and expand the focus of its field of enquiry to today's extent. While he was at TUM, the research center in Dornach was built in 1984, and the "münchner kolloquium" (Munich colloquium) and the initiative for a production-related user center in Augsburg were re-established in 1985. Joachim Milberg then joined BMW AG's board of management in Munich and became its chair in 1999. Additionally, Joachim Milberg was on the board of directors of many national and international companies. He received great acclaim from the business sector for his success in raising productivity and quality in BMW's factories to a very high standard, as well as for his successful solution to the problems with Rover and the reorganization of BMW. Joachim Milberg has been an honorary professor at TUM since 1998, and at the University of Duisburg-Essen since 2010.

- Member of the Berlin-Brandenburg Academy of Sciences and Humanities
- Member of the German National Academy of Sciences Leopoldina (since 2005)
- Member of the board of directors of Allianz Versicherungs-AG, Munich (2001-2006)
- Member of the board of directors of MAN AG, Munich (deputy chair) (2002-2007)
- Member of the board of administration as well as member of the Senate, Max Planck Society, Munich (2002-2008)

1966-1969	Study of manufacturing, TU Berlin
1971	Doctorate, TU Berlin
1972-1977	Manager, Gildemeister AG, Bielefeld
1978-1981	Head of the Automatic Lathe Division, Gildemeister AG
1981-1993	Professor of mechanical engineering tools and business management, TUM
1993-1999	Member of the board of management, BMW AG, Munich
1999-2002	Chair of the board of management, BMW AG, Munich
since 2002	Member of the board of directors, BMW AG, Munich
2004-2015	Chair of the board of directors, BMW AG, Munich

BMW manufacturing technology
industry robots assembly technology
computer-integrated construction machine tools

- Founding president of the National Academy of Science and Engineering (acatech) (2002-2009)
- Member of the board of directors, ZF, Friedrichshafen (2008-2011)
- Member of the board of directors, SAP AG, Walldorf (2007-2012)
- Member of the board of directors, John Deere & Company, Moline, Illinois, US (since 2003)
- Member of the board of directors, Festo AG & Co., KG, Esslingen (since 2003, chair 2011-2014)
- Member of the board of directors, Bertelsmann AG, Gütersloh (since 2005, deputy chair since 2011)

- Gottfried Wilhelm Leibniz Prize from the German Research Foundation (DFG) (1989)
- German Federal Cross of Merit (1994)
- Honorary doctorate from the University of Ljubljana, Slovenia (1994)
- Honorary doctorate from the University of Hanover (1996)
- Grashof-Denkünze from the Association of German Engineers (VDI) (2000)
- Bavarian Order of Merit (2001)
- General Pierre Nicolau Award from the CIRP (International Academy for Production Engineering) (2001)
- Honorary doctorate from the University of Cranfield, UK (2002)
- Ernst-Blickle Award from the SEW-Eurodrive Foundation (2003)
- Honorary doctorate from the TU Berlin (2004)
- Arthur-Burkhardt-Prize (2005)
- Hanns Martin Schleyer-Prize (2009)
- Bavarian Maximilian Order for Science and Art (2010)
- Inclusion in the Hall of Fame of German research (2011)
- Georg-Schlesinger Prize from the state of Berlin (2012)

Prof. Dr. med.
Michael Molls

Former professor and director of the Clinic for Radiotherapy and Radiation Oncology, born December 15, 1944



Michael Molls was a professor as well as the director of the clinic for radiotherapy and radiation oncology at TUM from 1992 to 2014. His further activities include serving as a member of the board of management and the board of directors at the university hospital Klinikum rechts der Isar and head of the Tumorzentrum München of both Ludwig Maximilian University and TUM. He was particularly committed to quality in the processes, results and structure of interdisciplinary oncology. In 1976, Michael Molls was successful in cultivating in vitro mouse preimplantation embryos (stem cells). This method enabled the discovery of new developmental and radiobiological findings. He has, as co-spokesperson, been responsible for the biomedical sector of the German Research Foundation (DFG) Munich Center for Advanced Photonics “cluster of excellence” since 2010. Michael Molls focused his clinical research on tumor hypoxia, imaging techniques for therapy planning, high-precision radiotherapy and the initiation of multicentric studies funded by the DFG and the German Federal Ministry for Education and Research. Molls’ group produced internationally renowned work on stereotactic radiation therapy for brain tumors, the early stages of lung carcinomas and the post-therapeutic quality of life with breast and prostate cancer as well as for elderly patients. As president and head of the Akademie der Deutsche Gesellschaft für Radioonkologie, Michael Molls introduced guidelines for the treatment of cancer patients and a curriculum for the further development of specialists. He helped stimulate the integration of radiobiological and physical medicine research in radiation oncology. Michael Molls is the author of approximately 300 publications and editor of textbooks, monographs and series of books in English on radiation oncology. He supervised 14 professorial teaching qualification processes, and seven of his colleagues achieved professorial and directorship appointments in Germany and internationally.

stem cells high-precision radiotherapy for tumors basic research and clinical studies tumour hypoxia interdisciplinary cancer treatment

- Member of the expert commissions of the German Council of Science and Humanities, DFG, Helmholtz Association of German Research Centers, federal and state ministries, and of advisory boards
- Member of the academic directorate of TUM’s research reactor (1996-2003)
- President of the German Society for Radiooncology (DEGRO) (1997-1999)
- Head of the Tumour Center Munich (TZM) of LMU and TUM (2001-2003)
- President of the academy for advanced training and continuing education of the DEGRO (2004-2009)
- Member of the board of management (from 2006), co-spokesperson (from 2010) and head of biomedicine for the German Research Foundation (DFG) Munich Center for Advanced Photonics (MAP) cluster of excellence
- Member of the medical review board of the DFG (cancer research and medical technology) (2007-2012)
- Member of the Peer Review College of the Danish Council for Strategic Research (2008)
- Head of the European radiation biology project CARDIORISK (EU 7th framework program) (2008-2011)
- Member of the academic advisory board for the ELI Beamlines Facility, Prague (Extreme Light Infrastructure, European Project) (since 2010)
- Initiator and head of multicentric clinical studies supported by the DFG and the German Federal Ministry of Education and Research (BMBF) (until 2014)
- Member of the Scientific Advisory Board of the National Center for Tumor Diseases Heidelberg, Dresden (NCT) (since 2015)
- Spokesperson for the TUM Emeriti of Excellence and in the extended board of TUM (since 2015)

1965-1971	Study of medicine and licensing examination, University of Freiburg
1972-1974	Occupational medicine in Turkey (Istanbul) and former Yugoslavia
1975-1976	Assistant at the Institute of Pharmacology and doctorate on the basis of an experimental study, University of Freiburg
1976-1992	Assistant, consulting doctor and chief consultant at the Institute for Radiation Biology and at the Radiation Clinic at the Essen University Clinic. Postdoctoral lecture qualification and university instruction license (venia legendi) for embryology, radiation biology and radiation therapy
1992-2014	Professor and director of the Radiation Therapy and Radiation Oncology Clinic at university hospital Klinikum rechts der Isar, TUM

- Hanns-Langendorff Prize (1979)
- Member of the German National Academy of Sciences Leopoldina (since 1998)
- President of the joint annual congress of the German and Austrian Societies of Radiation Oncology and the German Society for Medical Physics (DGMP) (2000)
- Honorary award from Munich Tumour Center (2007)
- Honorary member of the German and Austrian Societies of Radiation Oncology (2004, 2014)

Prof. Dr.-Ing.
Winfried Nerdinger

Former professor of history of architecture
born August 24, 1944



Winfried Nerdinger made significant contributions to art and architecture history research as well as to the public awareness of the importance of architecture. He focused his research on the architecture of the period from the 18th to the 21st century, the architecture and art history of Munich and the history of architectural presentation. He earned particular renown during his time as professor of architecture history, a position that was created specifically for him at TUM. Here, together with the architecture museum, he created the largest special and research archive for architecture in Germany, which was integrated into Munich's Pinakothek der Moderne museum in 2002. Under his supervision, the museum – which has become a unique institution in Germany combining collections, teachings and research – came to display a broad and diverse program of different exhibitions. The spectrum ranges from historical topics to the presentation of current architectural trends and engineering achievements. Winfried Nerdinger put together more than 70 exhibitions and recorded these for posterity in seminal catalogs. His projects also frequently brought him into contact with the architecture of National Socialism. In 2012, he was elected founding director of the NS Documentation Center in Munich, which was just being established. He was therefore entrusted with the important task of establishing a permanent collection on the history of National Socialism in Munich.

art history architectural representation
fictional buildings and cities reconstruction
national socialist architecture

- Associate member, Association of German Architects (BDA)
- President, International Confederation of Architectural Museums (1989-1994)
- Director, Department of Visual Arts, Bavarian Academy of Fine Arts (since 2004)
- Chair, Alvar-Aalto-Gesellschaft, Munich (since 2006)
- Head of German Research Foundation project "Hitler's Architects: Troost, Speer, Fick and Giesler" (since 2007)
- Member of the board of directors, Pinakothek der Moderne (2002-2012)

Exhibitions (extracts):

- Frei Otto – Leicht bauen, natürlich gestalten (Lightweight construction, natural form) (2005)
- Ort und Erinnerung – Nationalsozialismus in München (Place and memory: National Socialism in Munich) (2006-2007)
- Architektur wie sie im Buche steht. Fiktive Bauten und Städte in der Literatur (Architecture by the book: fictional buildings and cities in literature) (2006-2007)
- Munio Weinraub und Amos Gitai – Architektur und Film in Israel (2008-2009)
- Geschichte der Rekonstruktion – Konstruktion der Geschichte (History of reconstruction – construction of history) (2010)
- Der Architekt – Geschichte und Gegenwart eines Berufsstandes (The architect – the occupation in history and the present day) (2012-2013)

1965-1971	Study of architecture, TUM
1979	Doctorate in art history
1985	Appointment, McGill University, Montreal
1986-2012	Professor of history of architecture and director of the Architecture Museum, TUM
1989	Appointment, German Museum of Architecture (DAM), Frankfurt am Main
1995-2012	Director of the Architecture Museum of Swabia, Augsburg
since 2012	Founding director of the NS Documentation Center, Munich

- First Class Knight of the Order of the White Rose of Finland (2002)
- Architecture Prize from the Bavarian state Capital of Munich (2006)
- Medal "München leuchtet", culture prize from the Bavarian Capital of Munich (2006)
- Leo von Klenze Medal, supreme building authority, Bavarian State Ministry of the Interior (2009)
- Bavarian Architecture Prize and Bavarian State Prize for Architecture (2011)



After sixteen years in the industry, in which he was responsible for approximately 1,000 employees and a corresponding yearly revenue, Friedrich Pfeiffer added his exceptional service as an academic at TUM to his professional career. His industrial focus was astronautics and guided missile engineering. His theoretical research at the TUM focused on the basics of multibody system dynamics, and his practical work on the propulsion engineering of all kinds of transmission systems as well as in robotics and walking. Elastic multibody systems with one-sided contacts became a wholly new focus in a basic research. The simulation of CVT transmissions and the creation of the two-legged walking robot JOHNNIE are typical practical examples of this. He received the Körber European Science Award in 1993 for his work in the field of walking robots. His working environment always featured extensive international and interdisciplinary cooperation. Since 1990, he has been involved in the publication of more than ten international professional journals and book series. Friedrich Pfeiffer received numerous distinctions and honorary memberships for his academic opus. Since 2007, he has coordinated the Leonardo da Vinci Center for Bionics at the Technische Universität München.

robotics propulsion technology bionics
neurobiology walking robots multibody
system dynamics

- Consulting professor, Tongji University, Shanghai, China (1999)
- Member of the German Society of Aeronautics and Astronautics (DGLR)
- Member of the European Mechanics Society (EUROMECH)
- Member of the International Union for Theoretical and Applied Mechanics (IUTAM)
- Member of the selection committee of the German National Academic Foundation (1970-2002)
- Member of the senate of the German Research Foundation (DFG) (1996-2002)
- International member of the Russian Academy of Sciences (RAS), Moscow, Russia (since 2003)
- President of the International Association of Applied Mathematics and Mechanics (GAMM) (2002-2004)
- Member of the board of trustees of the Aachen and Munich Prize for technology and applied natural sciences (1995-2005)
- Member (since 1996) and rector (since 2006) of the scientific council, International Center for Mechanical Sciences (CISM), Udine, Italy

1955-1961	Studies in general mechanical engineering, TH Darmstadt
1965	Doctorate in aerodynamics, TH Darmstadt
1966-1970	Development engineer, Bölkow GmbH, Ottobrun/Munich
1970-1978	Director of astronautics, later director of Dr. Ludwig Bölkow's technical practice, Messerschmitt-Bölkow-Blohm (MBB)
1978-1980	Director of engineering, Bayern-Chemie GmbH, Aschau/Inn
1980-1982	Departmental director of Plant Development, MBB
1982-2000	Chair of mechanics, Department of Mechanical Engineering, TUM

- Körber European Science Prize, together with professors Felix Chernousko, Holk Cruse and François Clarac (1993)
- Honorary doctorate from the Russian Academy of Sciences (RAS), Moscow, Russia (1998)
- German Federal Cross of Merit (2000)
- Fellow of the Institute of Electrical and Electronic Engineers (IEEE) (2003)
- Fellow of the American Society of Mechanical Engineers (ASME) (2004)
- Honorary doctorate from the Technical University of Dresden (2004)
- Bavarian Order of Merit (2006)
- Honorary doctorate from the University of Bologna, Italy (2008)
- Leonardo da Vinci Award (ASME) (2010)

Prof. Dr. rer. nat.
Bernd Radig

Former professor of image analysis and knowledge-based systems
born July 24, 1944



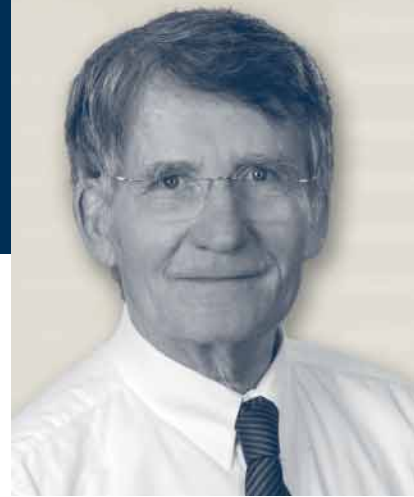
Computer scientist Bernd Radig conducts research in artificial intelligence, specifically in mechanical perception to understand images and image sequences. His investigations focus on cognitive systems that can see and understand what their cameras record. That includes the reconstruction of a three-dimensional world from two-dimensional images, the modeling of moving 3-D objects in image sequences, the semantic description of image sequencing and objects, as well as the automatic analysis of visually observed events. He helped advance the depiction of street traffic scenes as well as the automatic, parallel analysis of human movement (gesticulation, facial expression, body language) or the cooperation of autonomous mobile systems, such as robot football or service robots. Bernd Radig takes care cleverly to combine highly diverse research disciplines to allow for complex interrogation directed at generating concepts for practical and user-oriented solutions. This goal is documented in numerous successful research projects and particularly evinces itself in his close collaborative research with businesses within the industry. Bernd Radig was the founder and spokesperson for the board of directors of FORWISS, the national, inter-university research center, as well as of the consortium of Bavarian Research Associations (abayfor) – two organizations that, in collaboration with science, business and politics, are concerned with realizing innovative research projects. Additionally, he put his scientific and organizational expertise to good use as co-initiator and member of the board of management of the Excellence Cluster CoTe Sys. He is currently focusing on computer-assisted analysis of football (soccer) games in television recordings and the automatic construction of sighted machines. As a consultant and expert for ministries, governmental agencies and companies, Bernd Radig enjoys a lofty professional and academic reputation.

artificial intelligence cognitive systems
robots 3-D objects
virtual reality image sequence analysis

- Senior member of the Institute of Electrical and Electronics Engineers (IEEE)
- Member of the German Informatics Society (GI) and co-founder of the Artificial Intelligence division
- Co-founder of KI, the GI Artificial Intelligence division's magazine
- Co-publisher of the International Journal on Pattern Recognition and Image Analysis
- General chairman of the European Conference on Artificial Intelligence (ECAI), Munich (1988)
- General chairman of the German Association for Pattern Recognition (DAGM) annual symposium (1981, 1991, 2001)
- Founder and spokesperson for the board of directors of the Bavarian research center for knowledge-based systems (FORWISS) (1988-2006)
- Founder and chair of the Association of Bavarian Research Cooperations (abayfor) (1993-2007)
- Supervisory Board mandates of companies in IT and telecommunications
- Organizer of the 5th Open German-Russian Workshop "Pattern Recognition and Image Understanding", Herrsching am Ammersee (2005)
- Vice-Chairman of the Open German-Russian Workshop "Pattern Recognition and Image Understanding", Nizhni Novgorod (2011) and Koblenz (2014)
- Member of the board of management of the Excellence Cluster CoTeSys (2006-2011)

1967-1972	Study of physics and automata theory, University of Bonn
1978	Doctorate in information technology, University of Hamburg
1982	University teaching qualification in information technology, Hamburg University
1982-1986	Professor of computer science, University of Hamburg
1983-1986	Acting director of the chair of cognitive systems, Department of Computer Science, University of Hamburg
1985-1992	Appointments to the University of Karlsruhe, TUM and TU Berlin
1986-2009	Professor of image analysis and knowledge-based systems, TUM
since 2006	Head of the research group "Intelligent Autonomous Systems"
since 2012	Head of the research group "Image Understanding and Knowledge-Based Systems"

- German Federal Cross of Merit (1992)
- "Pro meritis scientiae et litterarum" of the Bavarian State Ministry for Science, Research and Art (2002)



Ralf Reichwald made a name for himself as one of the leading innovators in business administration research. He focused his academic work on organization, technology and management. In doing so, he concentrated on interdisciplinary questions concerning technical organizational transformation and its effect on market and corporate development. His publications encompass more than 20 books as well as approximately 200 essays in and contributions to collected editions. The series of works he assisted in publishing, “Markt- und Unternehmensentwicklungen” (market and corporate development), comprises around 150 volumes. Moreover, Ralf Reichwald’s interests include the future development and restructuring of universities. From 1991 to 1993, he was the founding dean of the Department of Business Studies of the TU Bergakademie Freiberg, Saxony, which awarded him an honorary doctorate in 1994. Ralf Reichwald was significantly involved in the Reform Project of TUM, and participated in several reform commissions for the restructuring of the university. His conceptual considerations were decisively able to forward the relaunch of the business sciences department, and in 2002 he was elected its first dean. In 2007, he was co-founder of the Center for Leading Innovation and Cooperation (Leipzig), where he continues to be active in research. In addition, he is a guest professor at the University El Manar in Tunis, which awarded him the title “professor honoris causa” in 2006 in recognition of his work in research and teaching. Ralf Reichwald has been director of the advisory board of the Peter Pribilla Foundation of TUM since 2005, and delegate for the university partnerships with the University of Tunis El Manar since 2009.

1965-1969	Studies in business administration, universities of Bonn, Marburg and Munich
1975-1989	Professor of manufacturing process management (MPM) and scientific management, University of the German Federal Armed Forces, Munich
1990-2000	Chair of general and industrial business administration, TUM
1991-1993	Founding dean, department of business sciences, TU Bergakademie Freiberg
2001-2009	Professor of business administration – information, organization and management, department of business sciences, TUM
since 2010	Professor of business and administration – organization and innovation management, Leipzig Graduate School of Management; and research director, Center for Leading Innovation and Cooperation (CLIC)

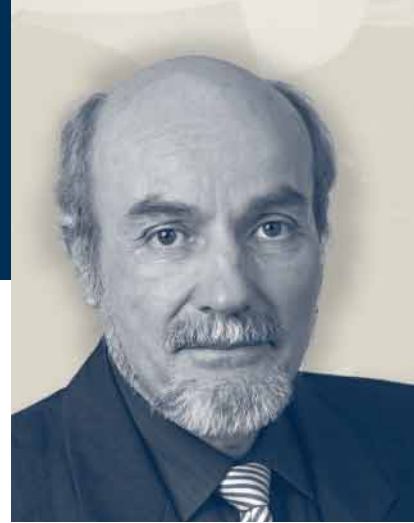
human resource management
interactive value creation tele-cooperation
microenterprise consumer integration
corporate organization

- Member of the board of the European Academy of Management (EURAM)
- Member of the advisory board of the Fraunhofer Institute for Industrial Engineering (IAO)
- Chair of the business and technology division at the Association of German Engineers (VDI) (until 2005)
- Member of the advisory board of MHM Holding GmbH, Germany
- Member of the senate of the Science Center of North Rhine-Westphalia (until 2005)
- Chair of the advisory board “Innovative Workplace Development and Services” of the Federal German Ministry for Education and Research (until 2005)
- Member of the board of trustees of the TU Bergakademie Freiberg, Saxony (until 2008)
- Member of the academic advisory board of Deutsche Telekom AG (until 2008)
- Chair of the advisory board of Munich Intellectual Property Law Center (MIPLC), Max Planck Society, Munich (until 2008)
- Chair of the advisory board of TUM’s Peter Pribilla Foundation (since 2005)
- Member of the executive board of the Center for Advanced Studies in Management (CASIM), Leipzig Graduate School of Management (since 2011)

Visiting professor at:

- University of Texas, Austin, USA (1983)
- Syracuse University, New York, USA (1994)
- University of Tunis El Manar, Tunisia (tenured since 1999)

- Research award (together with Arnold Picot) for technical and commercial communication, Alcatel Lucent Foundation for Communications Research (1984)
- Honorary senator of the TU Bergakademie Freiberg, Saxony (1994)
- Professor honoris causa of the University of Tunis El Manar, Tunisia (2006)
- Honorary Senator of the TU Bergakademie Freiberg, Saxony (2013)
- Medal of Honor of the VDI (2013)



Johannes Ring was director of TUM's Department for Dermatology and Allergology Am Biederstein for nearly 20 years, specializing in allergies and inflammatory skin diseases. During this time, he and Prof. Heidrun Behrendt worked together to establish the Center for Allergy & Environment (ZAUM) at TUM and developed successful patient training courses for atopic dermatitis and anaphylaxis. In total, Johannes Ring published more than 600 original articles and 400 reviews, as well as 25 books and monographs. During his many years as university dean of studies, he had a significant impact on the curriculum in Medicine. At the same time, Johannes Ring organized numerous international conferences and events, such as the World Allergy Congress 2005 in Munich, which attracted 7,000 participants. He was and still is a member of board of directors of important professional societies, such as the European Academy of Dermatology and Venereology (EADV) and the Collegium Internationale Allergologicum; and served as president of the German Society for Allergology and Clinical Immunology (DGAKI) and vice president of the World Allergy Organization (WAO). Most recently he was appointed editor in chief of the Journal of the EADV.

dermatology allergy-immunology
anaphylaxis Center of Allergy & Environment (ZAUM)
World Allergy Organization

- President of the European Society for Dermatological Research (ESDR) (1989-1990)
- President of the German Society for Allergology and Clinical Immunology (DGAKI) (1993-2002)
- Member of the board of directors of the German Society of Dermatology (DDG) (1998-2013)
- Cofounder of the Center for Allergy & Environment (ZAUM) at TUM (1999)
- President of the German Academy of Allergology and Environmental Medicine (DAAU) (since 20002)
- President of the European Academy of Dermatology and Venereology (EADV) (2004-2006)
- President of the Collegium Internationale Allergologicum (2004-2008)
- Member of the European Academy of Sciences and Arts (2009)
- Honorary member of the European Academy of Allergy and Clinical Immunology (EAACI) (2014)
- Member of numerous publishers' boards

1964-1970	Studies in medicine, LMU Munich
1968-1978	Studies in Bavarian history, LMU Munich
1970, 1979	Doctorate in both subjects, LMU Munich
1976	Habilitation in Immunology, LMU Munich
1977-1978	Postdoctorial fellow (German Research Foundation Fellowship) at Scripps Clinic, San Diego, California
1978-1990	Employment at the Department for Dermatology, LMU Munich
1983	Habilitation in Dermatology
1990-1995	Professor and director of the Department of Dermatology and Allergy, University Hospital Hamburg-Eppendorf
1995-2014	Director of the Department of Dermatology and Allergy, TUM
since 2001	Supervisor of the German Clinic for Dermatology and Allergy – Alexanderhausklinik Davos; from 2005, the High Altitude Clinic Davos
2009	Director of the Christine Kühne-Center for Allergy Research and Education (CK-CARE), Munich-Davos-Zurich. Education representative since 2014

- Homburg-Prize (1975)
- Sebastian-Kneipp-Award (1976)
- Albert-Knoll-Prize (1976)
- Honorary award from of the German Allergy- and Asthma Association (DAAB) (1983)
- Honorary award from the Croatian Medical Society (2002)
- Bavarian State Medal for Environment and Health (2005)
- Clemens von Pirquet Award from the EAACI (2009)
- Erich Fuchs Award from the Association of German Allergologists (AeDA) (2010)
- Honorary professor, Chongqing Medical University, China (2011)
- Award for Clinical Excellence in Dermatology, European Academy of Dermatology and Venereology (EADV) (2012)
- “Pro Meritis” Award from the European Dermatology Forum (EDF) (2013)
- Honorary award from the International League of Dermatological Societies (ILDS) (2014)

Prof. Dr.-Ing.
Ingolf Ruge

Former professor of integrated circuits
born December 22, 1934

As a frequent pioneer in his professional function, Ingolf Ruge sometimes had to tread the path less traveled. With the support of the Federal German Ministry of Research and Technology (BMFT), he was a significant contributor to the successful development of the semiconductor division and the development of microelectronics in German industry. He initiated a large national research and development project that, among other things, raised the global ranking of the semiconductor division of one company from 16 to 4. In 1973, he founded his first Fraunhofer Institute: the Institute of Solid State Technology; in 1999, his second followed: the Institute of Communications Systems. Despite his extensive services in management, Ingolf Ruge was an enthusiastic and inspiring teacher at university level: 170 dissertations, from which more than a dozen university professors emerged, bear witness to this. His great commitment to academic politics is apparent in his lengthy membership of the Scientific-Technical Advisory Board (WTB) of the Bavarian state government and the IT advisory boards of Federal German chancellors Schröder and Merkel.



solid state technology **solid state physics**
communications engineering **Fraunhofer Institutes**
semiconductor electronics information technology

Member of the Advisory Board for Research and Higher Education Issues of the Bavarian State Minister of Education and Cultural Affairs (1982-1988)

Member of the Scientific-Technical Advisory Board (WTB) of the Bavarian state government (1988-2001)

Member of the advisory board of the Bavarian Research Foundation (1994-2001)

Member of Federal German Chancellor Schröder's IT advisory board (2000-2005)

Spokesperson for the Bavarian Online-Congress (1998-2007)

Member of the UN Office of Information and Communication Technology (OICT) (2001-2010)

Member of the AG II at Chancellor Merkel's IT Summit (2006-2011)

1953-1958	Studies in electrical engineering, TH Munich
1964	Doctorate in semiconductor electronics, TH Munich
1967	University teaching qualification (habilitation) in semiconductor physics, TH Munich
1968-1971	Director of the Department of Semiconductor Engineering, Institute for Technical Electronics, TH Munich
1970	Appointment to Ruhr University, Bochum
1973-1999	Founding director of the Fraunhofer Institute of Solid State Technology, Munich
1999-2003	Founding director of the Fraunhofer Institute of Communications Systems, Munich
1972-2003	Professor of integrated circuits, TUM

German Federal Cross of Merit (1987)

Bavarian Order of Merit (1992)

Officer's Cross from the Federal Republic of Germany (1993)

Commander's Cross from the Federal Republic of Germany (2004)

"Unternehmer-Ehrenzeichen" from the Board of Trustees of the Bavarian Business Association (vbw) (2008)

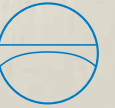
Prof. Dr.-Ing. Dr. h.c. mult.
Reinhard Rummel

Former professor of astronomical and physical geodesy
born December 3, 1945

Reinhard Rummel is one of the world's most influential scientists in physical geodesy and satellite gravimetry. He also works in the areas of higher geodesy, astronomical geodesy, gravimetry and potential theory. He was one of the principal initiators of GOCE (Gravity Field and Steady-State Ocean Circulation Explorer), the European Space Agency's satellite mission that was launched at the Russian rocket launch pad Plesetsk on March 17, 2009 and which completed its mission on November 11, 2013. The goal of the GOCE mission was to collect data on the Earth's gravitational field in unprecedented precision and detail for the purposes of geophysics, oceanography and geodesy. Reinhard Rummel also initiated the Global Geodetic Observing System (GGOS), which, in creating a network of international and interdisciplinary observatories, aims to construct a consistent geodetic model of the Earth. In recognition of his achievements in physical geodesy and satellite gravimetry, he was awarded the Bavarian Order of Merit in 2008 and the Bavarian Maximilian Order in 2010.



TUM Department of Civil, Geo and Environmental Engineering



global earthquake monitoring system satellite
gravimetry land surveying potential theory
geodetic earth model

Member of the Royal Netherlands Academy of Science (1989)
Fellow of the American Geophysical Union (1993)
Fellow of the International Association of Geodesy (1994)
Member of the Bavarian Academy of Sciences and Humanities (BAdW) (1997)
Honorary member, Hungarian Academy of Sciences (2001)
Member of the German National Academy of Sciences Leopoldina (2004)
Carl von Linde Senior Fellowship, TUM-IAS

Heiskanen Award, Ohio State University, USA (1977)
Vening Meinesz Medal, European Geophysical Society (1998)
Honorary doctorate from the University of Bonn (2005)
Honorary doctorate from the TU Graz, Austria (2005)
Prize for Good Teaching, State of Bavaria (2006)
Bavarian Order of Merit (2008)
Bavarian Maximilian Order for Science and Art (2010)
Soldner Medal from the Bavarian State Ministry of Finances (2012)
Honorary doctorate from the Ohio State University, USA (2013)
Honorary award from the German Association of Surveying (DVW) (2013)
Honorary doctorate from the Aristoteles-University, Thessaloniki, Greece (2014)
Levallois Medal of the International Association of Geodesy (2015)

1966-1970	Study of surveying engineering, TUM
1970-1974	Academic assistant, doctorate, Technical University of Darmstadt
1974-1976	Post-doctoral research, Ohio State University, USA
1976-1978	Academic assistant, German Geodetic Research Institute (DGFI), Munich
1978-1980	Academic assistant, Bavarian Academy of Sciences and Humanities, Munich
1980-1993	Professor of physical geodesy, Delft University of Technology, the Netherlands
1993-2011	Professor of astronomical and physical geodesy, TUM



high frequency engineering electronics
optoelectronics digital optical fibre transmission
semiconductor lasers
static noise analysis microwave circuits

The areas in which Peter Russer concentrated his academic work are diverse, encompassing high frequency engineering, electronics and optoelectronics. After writing his dissertation on the AC Josephson effect, he started work in 1971 on optical broadband data transmission at the AEG-Telefunken Research Institute in Ulm. Under his direction, the world's first digital broadband optical fiber transmission segment was realized, with a transmission rate of 1Gbit/s; he made a fundamental contribution to the theory of noise interference in electronic circuits and broadband modulation of semiconductor lasers. In 1981, Peter Russer accepted an appointment at TUM, where he was able to influence the field of high frequency engineering significantly on a national as well as an international scale. His theoretical and experimental work covers a large area that reaches from the development of methods to calculate electromagnetic fields, through integrated microwave and millimeter wave circuitry and static noise analysis in microwave circuitry, to methods of computer-aided design of microwave circuits and antennas. His great passion for passing on knowledge is evidenced in the numerous textbooks he wrote. Peter Russer is the author of more than 900 academic publications and the holder of more than 60 patents. At university, he excelled as a teacher and researcher who often managed to combine knowledge, teaching and practice very effectively. Moreover, he was successful in founding two spin-off companies in microwave engineering and EMI measurement technology.

Visiting professor, University of Ottawa, Ontario, Canada (1990)

Visiting professor, University of Victoria, British Columbia, Canada (1993)

1961-1967	Studies in electrical engineering, Vienna University of Technology
1968-1971	Research assistant, Institut für Physikalische Elektrotechnik, Vienna University of Technology
1971	Doctorate, Vienna University of Technology
1971-1980	Research associate, AEG-Telefunken Research Institute, Ulm
1992-1995	Director, Ferdinand-Braun-Institute for High Frequency Technology (FBH), Berlin
1994	Appointment to the Technische Universität Berlin
1981-2008	Professor of high frequency engineering, TUM

Member of the German Physical Society (DPG) (since 1971)

Member of the Austrian Physical Society (since 1971)

Member of the German Information Technology Society (ITG) (since 1974)

Senior member of the Institute of Electrical and Electronic Engineers (IEEE) (since 1981)

Vice President (1999-2002) and President (2002-2005) of Commission D: Electronics and Photonics of the International Union of Radio Science (URSI)

Member of the German Research Foundation's senate committee for Collaborative Research Centers (2000-2005)

Member of the National Academy of Science and Engineering (acatech) (since 2006)

Chair of the IEEE MTT-15 Microwave Field Theory technical committee (2005-2008)

Director of the project nanoelectronics group in the nanotechnology network, acatech (since 2008)

Member of the board of directors of the European Microwave Association (1997-2004, 2007-2008)

Member of the program and organizational committees of various international conferences, such as the IEEE Microwave Theory and Techniques Symposium, European Microwave Conference

Prize of the Information Technology Society (ITG) (1979)

Peter Johns Prize for the best publication in 1990 in the International Journal of Numerical Modeling (1991)

Fellow of the Institute of Electrical and Electronic Engineers (IEEE) (1994)

Distinguished educator award from the IEEE Microwave Theory and Techniques Society (MTT-S) (2006)

Honorary doctorate from the Moscow University of Aerospace Technology, Moscow Aviation Institute (2007)

Distinguished service award from the European Microwave Association (2009)

Ring of Honor from the Association for Electrical, Electronic and Information Technologies (VDE) (2010)

Pioneer award from the IEEE Microwave Theory and Techniques Society (2012)

IEEE Life Fellow (2013)

Prof. Dr.-Ing. Dr. h.c.
Gottfried Sachs

Former professor of aeronautical engineering and control
 born January 16, 1939



In his academic work, Gottfried Sachs concerned himself with aircraft performance and characteristics, as well as flight guidance and control. He focused on innovative new flight control displays with a 3-D presentation format to improve flight control. Gottfried Sachs became known far beyond the scope of his professional field for his ground-breaking success. He also focused and continues to concern himself with fundamental research on supersonic flight and aeronautical transport systems, regarding which he initiated the German Research Foundation's Collaborative Research Center "Transatmospheric Flight Systems", which he directed as spokesperson for 15 years. Other areas of his research include flight path optimizing to improve efficiency and fuel conservation, dynamic soaring (gliders, albatross) and bird flight with the goal of gathering bionic information on aeronautical engineering. Gottfried Sachs made a significant contribution as the publisher of many important international magazines and professional journals, and published more than 520 academic works, including four books, which were translated into Russian and Chinese, as well as twelve academic films. He has been a fellow of the American Institute of Aeronautics and Astronautics since 1998. He has also been a member of the board of management and secretary of the mathematics/sciences class from 2004 to 2013, and was elected vice president of the Bavarian Academy of Sciences and Humanities in 2006, 2008, 2010 and 2012.

- Member of the German Society for Aeronautics and Astronautics (DGLR) (since 1966)
- Member of several experts' committees in the German Society for Aeronautics and Astronautics (DGLR) (1970-1988)
- Member of the American Institute of Aeronautics and Astronautics (AIAA) (since 1975)
- Member of Aerospace Research and Development (AGARD) flight mechanics panel (1978-1994)
- Member of the selection committee for the bestowal of the Nachwuchspreis for the DGLR (1984-2004)
- Director of the German Society for Aeronautics and Astronautics (DGLR) subject group Flugmechanik und Flugführung (1986-1988)

1960-1965	Studies in mechanical engineering, concentration: flight technology, TH Darmstadt
1966-1977	Work engagements in large-scale research (German Research Institute for Aviation); higher-level education (TH Darmstadt); and industry (Dornier GmbH, Friedrichshafen)
1977-1983	Professor of aeronautical engineering and flight guidance, University of the Federal Armed Forces in Munich; director of the Institute of Flight System Dynamics
1983-2006	Professor of aeronautical engineering and control, director of the Department of Aerospace Engineering, TUM

flight path optimisation 3-D flight guidance display
 steering aviation simulation supersonic flight
 transatmospheric flight systems

- Founding member and member of the board of directors of the Bavarian Consortium for High Performance Scientific Computing (FORTWIHR) (1992-2001)
- Member of the program committee "Hypersonic Technology Program" of the Federal German Ministry of Research and Technology (BMFT) (1993-1995)
- Member of the German Aerospace Center (DLR) senate committee (1993-2000)
- Member of the AGARD flight vehicle integration panel (1994-1996)
- Member of the DLR (1999-2006)
- Member of the DLR senate (1999-2006)
- Member of the Bavarian Academy of Sciences and Humanities (BAAdW) (since 2000)
- Spokesperson of the association of the Collaborative Research Centers for the research of the fundamentals of future aerospace transport systems, RWTH Aachen, TUM, University of Stuttgart (2000-2003)
- Member of the National Academy of Science and Engineering (acatech) (since 2002)
- Chairperson of the Bavarian academy of sciences and humanities commission on geological high pressure research (2003-2009)
- Member of the board of trustees of the Foundation for the Advancement of Science in Bavaria (2004)
- Member of the Bavarian academy of sciences and humanities technology forum (since 2004)
- Member of the selection committee for the Bavarian government's Bavarian Innovation Prize (since 2007)
- Spokesperson for Munich Aerospace's academic advisory council – Department of Aeronautics and Astronautics (Aeronautics Section) (since 2011)

- Fellow of the American Institute of Aeronautics and Astronautics (AIAA) 1998
- Mechanics and Control of Flight Award from the AIAA (2003)
- Award for the Development of the Hungarian Aeronautical Sciences (2003)
- Award for Best Paper of the AIAA Modeling and Simulation Technologies Conference 2004, USA (2005)
- Technical Achievement Award, 6th International Conference on Nonlinear Problems in Aviation and Aerospace Conference (ICNPAA), Hungary (2006)
- Honorary doctorate from the Budapest University of Technology and Economics (2008)
- Ludwig-Prandtl-Ring from the German Society for Aeronautics and Astronautics (DGLR) (2013)

Prof. Dr. rer. nat.
Erich Sackmann

Former professor of experimental physics
born November 26, 1934



Erich Sackmann is considered to be the founder of biophysics in Germany. At the beginning of his academic career, he dedicated himself to the photophysics of organic crystals as well as the physics and uses of liquid crystals. Afterwards, he focused his interest on the physical basis of self-organization and the function of artificial and biological as well as the physics of the cell. Since his move to university, he put intensive effort into developing a syllabus for biophysics. He initiated and established a work group for biophysics within the German Physical Society (DPG). His working area is influenced by numerous interdisciplinary and international collaborations, which also led to three Collaborative Research Centers (SFB) in the German Research Foundation (DFG). In recognition of the ground-breaking results of his research on understanding the dynamics of membranes and biopolymer networks, the mechanical properties of cells as well as cell surface interaction, Erich Sackmann was awarded the DFG's Stern-Gerlach Prize in 2006. He has been working on his current research project "Fundamental Physics" in TUM's Institute for Advanced Study since 2007.

Visiting professor, Canadian Institute for Advanced Research (CIAR) (1990-1996)

Visiting professor, University of California, Los Angeles, CA, USA (2005)

Visiting professor, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland (2008)

biomaterial research micro-optical methodology
cell physics **biophysics** biosensor technology
membranes biopolymer networks

Member of the American Biophysical Society

Member of the American Physical Society

Member of the German Physical Society (DPG)

Member of the Institute of Physics, UK

Member of the academic advisory board of the Leibniz Institute for New Materials (INM), Saarbrücken

Member of the academic advisory board of the Weizmann Institute of Science, Israel

Member of the advisory board of the German Museum, Munich

President of the German Biophysical Society (DGfB) (1974-1980)

Fellow of the American Physical Society (2002)

Honorable member of the German Biophysical Society (DGfB) (2004)

Founder and chairperson of the work group for biophysics in the German Physical Society (DPG) (2003-2005)

Active member of the editorial board for the journals Acta Biomaterialia (since 2002) and Physical Review E (2013)

Participation in the German Research Foundation (DFG) Collaborative Research Center (SFB) 413: Dynamics and regulation of cytoskeleton dependent motile activities (1997)

Spokesperson for the DFG's Collaborative Research Center (SFB) 266: Organization and function regulation of synthetic and biological interphase using macromolecules and molecule aggregates (1986-2000)

Participation in the DFG's Collaborative Research Center (SFB) 563: Bioorganic functional systems on solids (2000)

1955-1961	Studies in physics, LMU, Munich, TH Stuttgart
1961-1964	Doctorate in physics, TH Stuttgart
1966-1968	Visiting researcher at Bell Telephone Laboratories, Murray Hill, NJ, USA
1968-1974	Research associate at the Max Planck Institute for Biophysical Chemistry, Göttingen
1974-1980	Professor of experimental physics, University of Ulm
1980-2003	Professor of experimental physics, TUM

Wolfgang-Ostwald-Prize from the German Colloid Society (2000)

Stern-Gerlach-Prize from the German Physical Society (DPG) (2006)

Prof. Dr. rer. nat. Dr. h.c.
Edward W. Schlag Ph.D.

Former professor of physical chemistry
born January 12, 1932

Edward W. Schlag conducted the first applications of static reaction theory in quantum form on chemical reactions and was able to demonstrate that, contrary to the assumption of the generally accepted transition theory, a reaction can reclose small ring molecules such as cyclo-propane. Dr Ahmed Zewail's direct measurements confirmed this finding, for which he received the Nobel Prize in Chemistry in 1999. Later Edward W. Schlag conducted the first experiments to measure rate constants of excited molecules in an isolated system without external disturbance and under various types of energy, which led to a basis for a theory of radiationless processes. Additionally, he worked intensively on the development of new spectroscopic methods, which came to be used in many diverse research laboratories across the globe. In particular, using REMPI (Resonance-Enhanced Multi-Photon Ionization) spectroscopy – developed simultaneously by him and Richard B. Bernstein – it could be demonstrated that intermediate resonance could lead the way to a precise selection of molecular spectra. Edward W. Schlag also discovered that highly excited Rydberg states – contrary to previous assumptions – aren't short lived but extremely long lasting. Their identification led to a new, high-resolution ion spectroscopy: Zero Kinetic Energy Spectroscopy (ZEKE). Edward W. Schlag, together with William B. Peatman, identified ZEKE states. In tandem with Klaus Müller-Dethlefs, he improved test resolution using pulsed laser methods. Together with his team, Edward W. Schlag conducted high-resolution sub-Doppler spectroscopy on molecules and was the first in the world to observe very weak rovibronic states and coupling. Most recently he was successful in obtaining evidence of very high-speed charge transport in proteins on a femtosecond timescale. Edward W. Schlag has always kept the quality and originality of his academic work at the highest international level, thereby prefiguring by many years the internationalization of research and teaching sought after by TUM today.

1949-1953	Occidental College, Los Angeles, California, USA
1953-1958	Doctorate in reaction kinetics, University of Washington, USA
1959	Work engagement at du Pont de Nemours, Buffalo, New York, USA
1960-1963	Assistant professor, Northwestern University, Evanston, Illinois, USA
1964	Associate professor, Northwestern University, Evanston, Illinois, USA
1964-1971	Full professor, Northwestern University, Evanston, Illinois, USA
1971-2000	Professor of physical chemistry, TUM



TUM Department of Chemistry



zero kinetic energy electron spectroscopy (ZEKE)
physical chemistry multiphoton mass spectrometry
REMPI method **spectroscopy**

Alfred P. Sloan Fellow (1965)

Member of the Bavarian Academy of Sciences and Humanities (since 1978)

Member of the Academia Europaea (since 1998)

Member of the National Fulbright Committee for Germany

Member of the German-Israeli Academic Committee of the Minerva Foundation of the Max Planck Society

Chair of the board of management of the Fritz Haber Center for Molecular Dynamics, Hebrew University, Jerusalem, Israel

Member of the selection committee for the US Senior Scientist Award Program of the Alexander von Humboldt Foundation

Fellow of the American Physical Society

Woodward lecturer, Yale University, USA (1987)

Fritz Haber lecturer, Hebrew University, Jerusalem, Israel (1988)

Ames lecturer, University of Edinburgh, Scotland, UK (1990)

Guest lecturer, the Welch Foundation Conference (1994)

John Wilfred Linnett visiting professor of chemistry, Cambridge University, UK (1995)

Charles M. Knight lecturer, University of Akron, Ohio, USA (1996)

Bonhoeffer-Eucken-Scheibe lecturer of the German Bunsen Society for Physical Chemistry (DBG) (1997)

James Franck lecturer, Israel Academy of Sciences, Jerusalem, Israel (1998)

CRC lecturer, California Institute of Technology, USA (1999)

Honorary doctorate from the Hebrew University, Jerusalem, Israel (1988)

Gold Honorary J. Heyrovsky Medal from the Academy of Sciences of the Czech Republic (1993)

Werner-Heisenberg-Medal from the Alexander von Humboldt Foundation (2001)

Prof. Dr. rer. nat.
Karl-Heinz Schleifer

Former professor of microbiology
born February 10, 1939



From the very beginning of Karl-Heinz Schleifer's academic career, he focused on the identification and classification of bacteria and was the first academic in Germany to develop the foundation of microbial hybridization probe analysis. Because of his work, it is possible today to detect and identify bacteria in waste water, food and other environmental samples without first cultivating them in a laboratory – thereby acquiring a wholly new insight into the microbial world. His ideas and visions have heavily influenced not only the results of numerous German Research Foundation (DFG) Collaborative Research Centers (SFB) and EU research projects, but also the work of his students. Karl-Heinz Schleifer made a significant contribution to the Technische Universität München's position at the forefront of the field of biology with his exceptional research in microbiology, molecular biology and microbial ecology. He received the Körber European Science Award in 1995 for his scientific achievements. In 2001, he was designated a "highly cited researcher" by the renowned Institute for Scientific Information (ISI). From 2005 to 2008, he was president of the International Union of Microbiological Societies (IUMS), which functions as an umbrella organization and international representative body for more than 100,000 microbiologists worldwide.

Contribution to the DFG's Collaborative Research Center (SFB) on biotechnology (1980-1994)

Contribution to the EU project on lactobacteria (1988-1994)

Contribution to the DFG's Collaborative Research Center (SFB) on waste water biotechnology (1995-2001)

Contribution to the EU project on pseudomonads (1994-2000)

Contribution to the EU project on protozoa (2000-2006)

1959-1964	Studies in biology, chemistry and geography, TH Munich
1967	Doctorate in biology, TH Munich
1966-1969	Research associate, Institut für angewandte Botanik, TH Munich
1971-1974	Academic councillor and professor, LMU Munich
1972	Superintendent director of the Department of Microbiology, LMU Munich
1979-1989	Appointments to departments at Technical University of Berlin and Hohenheim, Vienna
1974-2007	Professor of microbiology, TUM



Hybridization probe analysis waste water biotechnology
pseudomonads microbiology microbial
ecology biotechnology molecular biology

Member of Bergey's Manual Trust (Taxonomy of Prokaryotes) (since 1980)

Corresponding member of the Royal Academy of Veterinary Sciences, Madrid, Spain (since 1984)

Corresponding member of the Academy of Sciences and Humanities, Göttingen (since 1987)

President of the German Society for Hygiene and Microbiology (DGHM) (1989-1992)

Secretary general of the Federation of European Microbiological Societies (1986-1994)

Member of the American Academy of Microbiology (since 1995)

Designated "highly cited researcher" of the Institute for Scientific Information (ISI) (2001)

Member of the academic advisory council of the Max Planck Institute for Marine Microbiology, Bremen (1998-2004)

Member at large of the International Coordinating Committees of the American Society for Microbiology (1998-2004)

President of the International Union of Microbiological Societies (IUMS) (2005-2008)

Honorary member of the Association for General and Applied Microbiology (VAAM) (2013)

Körber European Science Prize (1995)

Award from the Society for Hygiene and Environmental Medicine (1997)

Ferdinand Cohn Medal (2001)

Officer's Cross from the Federal Republic of Germany (2006)

Bergey Medal from the Bergey Manual Trust (2009)

Lwoff Award from the Federation of European Microbiological Societies (2009)

Prof. Dr. med.
Albert Wilhelm Schömig

Former professor of internal medicine
born May 8, 1946



Albert Schömig's area of research is vascular and stem cell biology with a special focus on diseases of the coronary vessels, antithrombotic strategies and inducible pluripotent stem cells. One of his academic concentrations is atherosclerosis and its primary complication – acute heart attack brought on by its molecular mechanisms – and the innovative possibilities of interventional therapy. Albert Schömig was able to develop new therapeutic concepts and catheter technology out of basic research and to test them in extensive clinical studies. In 1992, he accepted a professorship in internal medicine at TUM and became the director of the first medical clinic at the university hospital Klinikum rechts der Isar. Additionally, he took over the Cardiovascular Disease Clinic at the German Heart Center Munich. Under his direction, cardiology and angiology at TUM developed into one of the greatest cardiovascular centers of excellence in Europe. In addition, he started the Isar-Zentrum in Munich, the largest academic research organization for interventional cardiology in Germany. From 2005 to 2012, Albert Schömig served two terms as medical director of the German Heart Center Munich and was instrumental in restructuring and expanding its services. His groundbreaking research has justifiably made him one of the leaders of modern interventional cardiology. In a ranking of the 50 most cited German-speaking heart researchers from 2004 to 2007, carried out by Laborjournal magazine, Albert Schömig topped the list and, according to the h-index of ISI statistics, is one of the four most cited scientists and academics at TUM.

coronary artery disease anti-thrombocyte
strategies pluripotent stem cells
angiology catheter technology interventional cardiology

Albert Schömig is a member of many national and international professional societies and co-publisher of numerous academic and scientific publications and book contributions

Research residency, Edinburgh, Scotland (1983-1984)

Coordinator of the EU project Cardiogenics (2006-2010)

Head of the ethics commission of the TUM School of Medicine (1995-2012)

1965-1971	Study of medicine at the universities of Würzburg and Heidelberg
1972	Doctorate, University of Heidelberg
1973-1975	Assistant, Pharmacological Institute, University of Heidelberg
1975-1983	Intern at the Heidelberg University Hospital
1984-1987	Chief physician, Medizinische Poliklinik Heidelberg, thereafter at the Heidelberg University Hospital
1987-1992	University professor and deputy medical director, University of Heidelberg
1992-2012	Professor of internal medicine and director of the I. Medizinische Klinik und Poliklinik, TUM
1995-2012	Head of the Department of Cardiology of the German Heart Center Munich
2005-2007	Medical director, German Heart Center Munich
2011-2012	Medical director, German Heart Center Munich

Prof. Dr. med. Dr. h.c.
Jörg-Rüdiger Siewert

Former professor of surgery
 born February 8, 1940



Rüdiger Siewert is one of the most eminent surgeons in Germany and is regarded as a pioneer in surgical oncology. He devoted more than three decades to innovative surgical methods and interdisciplinary cancer treatment, and is one of the leading specialists in esophageal and gastric surgery. Rüdiger Siewert played a major role in the integration of the university hospital Klinikum rechts der Isar into TUM, and it is today one of the most renowned university hospitals in Europe. In 1999, together with his colleagues in radiotherapy, as well as specialists in hematology and oncology in the 3rd Department of Medicine, he founded the Tumor Therapy Center of TUM's university hospital Klinikum rechts der Isar, which put them at the forefront of their field in Germany. This model for interdisciplinary cancer treatment has since become pervasive in the sector; German Cancer Aid now supports dedicated comprehensive cancer centers based on the structure of the Munich pilot project. Rüdiger Siewert has been honored for his academic and medical services with countless national and international distinctions and awards. After becoming a professor emeritus of TUM, he served as chief medical director and chair of the board of directors at Heidelberg University Hospital. In 2011, he took a position at the Freiburg University Hospital and has been working there since then. Rüdiger Siewert was also active until 2012 as the chair of the Association of German University Hospitals (VUD).

Visiting professor, Memorial Sloan Kettering Institute, New York, USA (2000)

Visiting professor, Hong Kong Medical Center, China (2001)

Visiting professor, Harvard Medical School, Boston, Massachusetts, USA (2002)

Visiting professor, Johns Hopkins Hospital, Baltimore, Maryland, USA (2002)

1965	Doctorate in medicine, Virchow-Klinikum, Berlin
1972	Specialization in surgery, Georg August University, Göttingen
1977	Extraordinary professor and medical director of the Klinik für Allgemeinchirurgie, Georg August University, Göttingen
1981	Appointment as professor of surgery at TUM and the University of the Saarland, Homburg
1987-2007	Medical director of the university hospital Klinikum rechts der Isar, TUM
2007-2011	Chief medical director and chair of the board of management at Heidelberg University Hospital
since 2011	Managing medical director and chair of the board of management at Freiburg University Hospital

gastric surgery interdisciplinary
 tumor treatment experimental medicine oncology
 oesophageal surgery

- Chair of the Bavarian Association of Surgeons e. V. (1986)
- President of the International Society for Diseases of the Esophagus (1989-1992)
- Member of the German National Academy of Sciences Leopoldina (1993)
- President of the congress of the German Cancer Society (1998)
- President of the International Gastric Cancer Association (1997-1999)
- Chair of the board of management of Forum MedTech Pharma e. V. (Allianz Bayern Innovativ) (1999)
- Founding president of the of the German Society for General and Visceral Surgery (DGAV) (1998-1999)
- President of the of the German Society of Surgery (DGCH) (2001-2002)
- Appointment to the Expert Committee on University Medicine in Berlin (2002)
- Honorary professor of Huazhong University of Science and Technology, Wuhan, China (2003)
- President of the International Society of Surgery (2003-2005)
- Permanent senator of the German Society of Surgery (2006)
- Supervisory board member of Tübingen University Hospital (1998-2007)
- Spokesperson for the Medical Technology of Allianz Bayern Innovativ (MedTech Pharma e. V.) (2006-2007)
- Chair of the board of management for the Association of German University Hospitals (VUD) (2001, 2003, 2006-2012)
- Honorary member of various regional and national surgical societies

- Science Prize from the German Society of Surgery (1987)
- German Federal Cross of Merit (1994)
- Bavarian Order of Merit (1997)
- Officier de l'Ordre de la Légion d'honneur (2001)
- Honorary doctorate from Luciano Blaga University, Sibiu, Romania (2002)
- German Cancer Aid Award (2005)
- Rudolf Pichlmayr-medal from the German Society for General and Visceral Surgery (DGAV) (2007)
- Honorary doctorate from the University Freiburg (2013)
- Rudolf-Nissen-Medal from the German Society for General and Visceral Surgery (DGAV) (2015)

Prof. Dr. Dr. h.c.
Herbert Spohn

Former professor of mathematical physics
born November 1, 1946



Herbert Spohn's research covers the area of mathematical and statistical physics, as well as applied probability theory, with a focus on dynamic processes. This includes the derivation of kinetic equations, the dynamics of open quantum systems, stochastic interactive particle systems, stochastic growth processes and boundary layer dynamics. In 2011, Herbert Spohn was twice honored for his exceptional academic work. The American Mathematical Society awarded him the Leonard Eisenbud Prize for Mathematics and Physics. This recognized his work on exact universal distribution in the context of the dynamics of driven phase boundary layers and growth processes, in particular their surprising connection to the statistical mechanics of line ensembles, random matrix theory and directed polymers in random media. Additionally, the American Institute of Physics, together with the American Physical Society, awarded Herbert Spohn the Dannie Heineman Prize for Mathematical Physics; and the Association of German Mathematicians (DMV) honored him with the Cantor-Medaille in 2014. Herbert Spohn became famous for his work in the microscopic derivation of the Boltzmann equation and the hydro-dynamic limit of stochastic interactive particle systems. Up to now, he has published two monographs and more than 250 articles. Herbert Spohn can therefore take his place amongst the world's leading mathematicians and physicists.

Research residencies:

Institut des Hautes Études Scientifiques (IHÉS), Paris, France

Institute for Advanced Study (IAS), Princeton, USA

Kavli Institute for Theoretical Physics (KITP), Santa Barbara, USA

Visiting professor, Rutgers University, USA

Visiting professor, Kyushu University, Japan

1967-1972	Study of physics, universities of Stuttgart, Oregon and Munich
1975	Doctorate, LMU Munich
1975-1980	Academic assistant, LMU Munich
1980-1982	Recipient of the Heisenberg fellowship of the German Research Foundation
1982-1998	Professor of theoretical solid-state physics, LMU Munich
1998-2012	Professor of mathematical physics, TUM, and associate member of the Department of Physics

statistical physics applied probability theory
quantum systems boundary layer dynamics
growth processes random matrices

Copublisher of various professional publications (since 1982)

President of the International Association of Mathematical Physics (2000-2003)

Member of the review board of the German Research Foundation (2004-2008)

Guest speaker at the International Congress of Mathematicians (ICM), India (2010)

Chair of the C18 Commission of the International Union of Pure and Applied Physics (IUPAP) (2009-2011)

Member of the scientific advisory board of the Mathematical Science Center of Tsinghua University, Beijing (since 2011)

Member of the scientific advisory board of the Niels Bohr International Academy, Copenhagen, Denmark (2011-2013)

Member of the academic advisory council of the Erwin Schrödinger International Institute for Mathematical Physics (ESI), Vienna, Austria (2011-2013)

DFG priority program 1033: Interagierende stochastische Systeme von hoher Komplexität (1997-2003)

DFG priority program 1095: Analysis, modeling and simulation of multiscale problems (2000-2006)

Approximately 25 individual DFG proposals, including topics such as: Wachstumsprozesse und Zufallsmatrizen (2002-2007), Stromfluktuationen für stationäre eindimensionale getriebene Gittergase (2007-2010), the unbinding transition of the bipolaron (2008-2012), exact solutions of the one-dimensional Kardar-Parisi-Zhang equation (since 2012)

Max Planck Research Award (1993)

Leonard Eisenbud Prize for Mathematics and Physics (2011)

Dannie Heineman Prize for Mathematical Physics (2011)

Tomassoni Prize from La Sapienza University of Rome, Italy (2011)

Honorary doctorate from l'Université Paris-Dauphine (2011)

Cantor-Medaille from the Association of German Mathematicians (DMV) (2014)

Henri Poincaré Prize of the International Association of Mathematical Physics (2015)

Prof. Dr.-Ing.
Theodor Strobl

Former professor of hydraulic engineering and hydraulic management
born August 25, 1941



TUM Department of Civil, Geo and Environmental Engineering



Theodor Strobl concentrated his career development on the issues concerning hydraulic engineering and hydraulic management. As a highly influential expert, he was involved as a consultant in numerous large international building projects, such as embankment dam projects in Jordan, Nepal, Kenya and Oman. His academic interest covers a broad spectrum of issues in hydraulic engineering. He concerned himself with the underground insulation of dams, the use of roller compacted concrete in dam walls as well as security surveillance of dams, for example by utilizing fiberglass mechanics. Theodor Strobl wrote important works on the effectiveness of flood protection systems, bed load transport after a flood and the natural regeneration of rivers and streams (mathematical and physical models). His expertise was and is still in demand for numerous public projects, for example in Bavaria. He was responsible for the planning and construction of the Franconian lake landscape, and was heavily involved in the Bavarian Ministry of the Environment's formulation of guidelines for residual flow. Apart from this, the support and optimization of hydraulic energy is a central concern of his. He is much sought after by power supply companies as an adviser on hydraulic engineering and management matters. In recent studies, he has been involved in, among other things, the possibility of fair water distribution in drought areas around the world.

underground dam insulation
flood protection dam insulation
hydraulic engineering projects natural river and
stream regeneration embankment dam construction

Consultant for governments and engineering and construction firms as a member of various expert panels for design, construction and management of large hydraulic construction projects in Germany, Austria, Egypt, China, Iran, Jordan, Kenya, Nepal, Nigeria, Oman, Switzerland, Turkey, United Arab Emirates and Cyprus (since 1990)

Expert judge in competitions for flood protection and natural regeneration of rivers and streams in Germany (since 2001)

Consultant to the Bavarian Water Management concerning issues on flood protection, river construction and bed load operations (morphological issues)

Chairperson of the expert committee on dams for the German Association for Water, Wastewater and Waste (DWA) (1990-2009)

Member of the German Geotechnical Society (DGGT)

Member of the International Commission on Large Dams (ICOLD)

Member of the Executive Board of the German National Committee on Large Dams (DTK)

1963-1968	Studies in structural engineering, TH Darmstadt
1968-1971	Construction project director at construction sites in Brazil and Germany with Hochtief AG, Essen
1975-1981	Construction engineer for state of Bavaria; dam consultant, Supreme Building Authority, Munich
1982	Doctorate in structural engineering, TH Darmstadt
1982-1987	Director of the New Dams Construction Office, Nuremberg
1987-1989	Ministry council, director of the subject area of Dams and Hydraulic Energy, Supreme Building Authority, Munich
1989-2007	Professor of hydraulic engineering and hydraulic management, TUM; director of the Obernach Research Center (Oskar von Miller Institute)

Heinz Maier-Leibnitz Medal from TUM (2009)

Honorary Needle from the German Association for Water, Wastewater and Waste (2010)

Prof. Dr. med.
Anna-Elisabeth Trappe

Former professor of neurosurgery
born December 5, 1939



Anna-Elisabeth Trappe has gained great merit in the areas of medical research and teaching as well as in patient care. She is considered to be a pioneer and recognized specialist in spinal diagnostics and surgery. In 1995, she became the first full professor to hold a chair in neurosurgery in Germany, at TUM's university hospital Klinikum rechts der Isar. Under her direction, the neurosurgical hospital became a nationally and internationally recognized and renowned facility. As a neurosurgeon, her commitment helped her become the first female appointee of the School of Medicine, and she held this appointment for many terms of office. Since then, Anna-Elisabeth Trappe has developed important diagnostic and operative techniques and forms of therapy. Her contributions, particularly in spinal and spinal fluid diagnostics, were influential in having various imaging indicators, notably magnetic resonance tomography, substantiated by scientific studies and accepted into routine diagnostics. She further developed microsurgical operation methods and introduced the use of an endoscope into special neurosurgical procedures. She led the way to having a neuro-navigational device for the brain used for the first time at the university hospital Klinikum rechts der Isar in 1993. Anna-Elisabeth Trappe can look back on more than 15,000 operations during the course of her professional career. Even years after she became a professor emerita, she is still active as a neurosurgeon at Klinikum Freising, where she showed great commitment in establishing a Department of Spinal Surgery and making the hospital one of the top locations for spinal operations.

spinal surgery **neuronavigation**
endoscopy microsurgery operation techniques
magnetic resonance tomography

Member of the Germany Society of Neurosurgery (DGNC)

Member of the German Society for Neurotraumatology and Clinical Neurorehabilitation (DGNKN)

1959-1966	Study of medicine, LMU Munich
1969	Doctorate in medicine, university hospital Klinikum rechts der Isar, TUM
1969-1979	Assistant in the department of neurosurgery, surgical hospital, Klinikum rechts der Isar
1975	Specialist in neurosurgery
1979-1995	Acting director of the Department of Neurosurgery, Surgical Hospital, Klinikum rechts der Isar
1995-2006	Professor of neurosurgery, TUM
2006-2012	Chief physician of the Department of Spinal Surgery and Neurotraumatology
since 2012	Medical adviser, Klinikum Freising and practice in a doctor's office in Munich

Heinz Maier-Leibnitz Medal from TUM (2004)

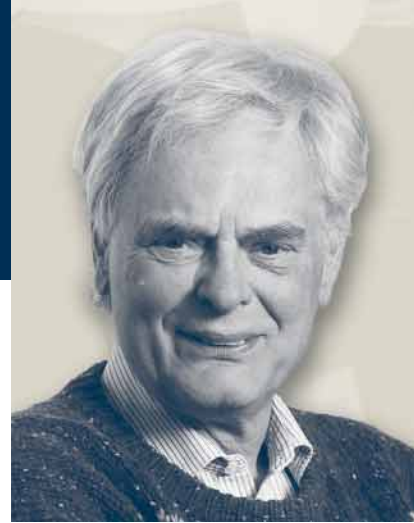
Bavarian Order of Merit (2005)

“Pro meritis scientiae et litterarum” award from the Bavarian State Ministry of Science, Research and Art (2005)

Bavarian Maximilian Order for Science and Art (2010)

Prof. Dr. med. Drs. h.c.
Hermann Wagner Ph.D.

Former professor of microbiology
born May 20, 1941



Hermann Wagner's main area of activity was the complex defense mechanisms of the congenital and adaptive immune systems. He was fascinated by the possibility of strengthening immunity to pathogens with continually improving methods of immunization. At the beginning of his academic career, Hermann Wagner was working on mechanisms to activate killer T cells and the role played by bacterial superantigens. He completed his research residency in Melbourne at the Walter and Eliza Hall Institute in 1973 with a doctoral dissertation about T cell mediated immune responses. At TUM, he worked to make "infection immunology" one of the academic concentrations of the medicine department. In 1995 he was one of the first scientists to discover the importance of toll-like receptors (TLRs) for research into infections and immunology. Having published more than 370 works, Hermann Wagner is one of the most frequently cited immunologists in Europe. He has served as honorary president of the Deutsche Gesellschaft für Immunologie (German Society for Immunology), dean of the School of Medicine at TUM and chair of the academic advisory council of the Interdisciplinary Center for Clinical Research in Würzburg (IZKF).

Member of the Alexander von Humboldt Foundation's judging panel for immunology and medical microbiology (1980-1986)

Member of the German Society for Immunology advisory council (1983-1993)

Chair of the AIDS assessment group of the Federal German Ministry of Research and Technology (1987-1994)

Member of the WHO steering committee ARV (AIDS associated retrovirus) (1989)

1961-1968	Study of medicine, University of Tübingen
1967	Doctorate, University of Tübingen
1973	PhD, Melbourne University, Australia
1973-1978	Academic assistant, Institut für Mikrobiologie, University of Mainz
1978-1983	Professor at the Department of Microbiology, University of Mainz
1981	Consultant in microbiology and infectious disease epidemiology
1983-1989	Professor of medical microbiology and immunology, University of Ulm
1989-2008	Professor of medical microbiology, immunology and hygiene, TUM

immune system infection immunology
immunization processes toll-like receptors (TLRs)
cell activation Superantigen tumor intervention

Member of the academic advisory council of the National Research Center for Environment and Health (GSF), renamed the Helmholtz Center Munich (1989-1994)

President of the German Society for Immunology (1990-1992)

Member of the Federal German Ministry of Education and Research's infectiology assessment group (1993-1997)

Chair of the academic advisory council of the Interdisciplinary Center for Clinical Research Würzburg (IZKF) (since 1997)

Honorary member of the German Society for Immunology (2005)

Member of the Bavarian Academy of Sciences and Humanities (BAAdW) (since 2007)

Member of the German National Academy of Sciences Leopoldina (since 2008)

Project supervisor for Collaborative Research Centers, Department of Medicine, University of Mainz (1973-1983)

Founding member and spokesperson for Collaborative Research Center (SFB) 322: Lympho-hematopoiesis (1986-1989)

Head of the German Research Foundation research group: Immunobiology of bacterial mitogens (1991-1996)

Founding member of Collaborative Research Center (SFB) 391: Mechanisms of fast cell activation (1995-2007), project supervisor and member of board of management (1999-2010)

Founder of Collaborative Research Center (SFB) 456: Target structures for selective tumor interventions (1999-2007), project supervisor and member of board of management (1999-2010)

Founding member and member of the board of management of Collaborative Research Center (SFB) 576: Facultative microbial pathogenesis and innate immunity (2001-2011)

Behring-Kitasato Prize, Japan (1988)

Honorary doctorate from Julius Maximilian University, Würzburg (2001)

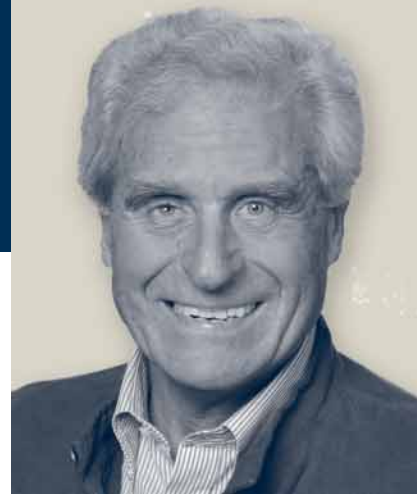
German Federal Cross of Merit (2003)

Bavarian Order of Merit (2007)

Honorary doctorate from University of Bonn (2013)

Prof. Dr. Dr. habil. Drs. hc.
Gerd Wegener

Former professor of wood studies and wood technology
born July 13, 1945



During his time as the head of his chair (current title: chair of wood science), Gerd Wegener helped achieve widespread international renown, and he is still sought after and highly prized as an expert in the field of wood science. Gerd Wegener is responsible for many innovations in the research of wood as raw material and wood as a construction material. His education in wood science and forestry – together with his practical experience in carpentry and the lumber industry and his initial education in structural engineering – sparked his interest in wood and its growing importance as a sustainable raw material very early on. The intelligent use of wood was always his primary concern: from wood as a universal building material for the entire construction industry and as a raw material for paper manufacturing and innovative chemical products to the use of waste wood for contemporary energy recovery. He was always particularly conscious of the environmental sustainability of new technologies and products. To a large degree, Gerd Wegener was responsible for the development of new raw and construction materials that impacted on the wood construction industry with their technical innovation and ecological features. This became very clear during the successful, attendance record-breaking exhibition “Building with wood – paths to the future” in TUM’s Museum of Architecture, in the co-ordination of which he was involved. In recent years, the exceptional importance of sustainable forestry and the resource-friendly use of wood – both effective elements of climate protection – were at the center of Gerd Wegener’s work. He is the co-author of the authoritative volume Wood (1984), was invited as a guest lecturer to numerous universities world-wide, worked as a consultant and helped evaluate national and international projects and research programs. He has been director of the cluster “Forestry and Wood” as part of the Bavarian state government’s cluster initiative since 2006, and is therefore – despite his retirement – an active scientist and academic within his extensive network and a manager in the areas of forestry and the many diverse uses of wood.

1964-1966	Studies in structural engineering, TH Munich
1967-1970	Studies in wood science, University of Hamburg
1975	Doctorate in forestry, LMU, Munich
1975-1986	Research associate, Department of Wood Science and Technology, LMU Munich
1986-1993	Adjunct teaching professor, LMU Munich
1993-2010	Professor of wood science and technology, director of Holzforschung München (1993-2000 at LMU, 2000-2010 at TUM)



wood science resource management
reducing of greenhouse effect ecological balance
regrowing raw material technical ceramics

- Fellow of the International Academy of Wood Science (1988)
- Member of the board of trustees of the Leo-Schörghuber-Foundation (1994-2010)
- Head of the academic advisory board of INTERFORST international trade fair (1994-2010)
- Member of the executive committee (1994-2010) and vice president (2002-2010) of the German Society for Wood Research e. V (DGfH)
- Chair of the forestry and wood science consulting committee of the DFG (1991-1999)
- Member of the Chemical Process Technology assessment committee of the Federation of Industrial Research Associations “Otto von Guericke” (AiF) (1996-2010)
- Member of the board of trustees for the Josef Umdasch Research Prize from the University of Natural Resources and Life Sciences (BOKU), Vienna (2006-2012)
- Member of the university council of the Hochschule Rosenheim (2004-2010)
- Member of the advisory committee of the Netzwerk Holz Schweiz (2005-2010)
- Expert for the German Federal Environmental Foundation (DBU)
- Editor in chief of the academic peer journals European Journal of Wood and Wood Products and Wood Science and Technology (1994-2013)

- Habilitation Prize from LMU (1986)
- Honorary doctorate from the Technical University, Zvolen, Slovakia, (1997)
- Medal of Honor in silver from the Bavarian Farmers Association (1998)
- Honorary doctorate from the St Petersburg State Forest Technical Academy, Russia (2005)
- Order of merit from the Bavarian Council for the Timber Industry (2007)
- Silver and golden Honorary Needle from the Bavarian Carpentry (2009, 2010)
- Order of Merit of the Federal Republic of Germany (2009)
- Schweighofer Main Prize (2009)
- Bayerischer Löwe (2010)
- Golden Honorary Needle from the Bavarian Association of Forest Owners (2011)

Prof. Dr.
Wolfram Weise

Former Professor of Theoretical Physics (applied quantum field theory)
born February 14, 1946



Wolfram Weise is an internationally renowned scientist in the field of theoretical nuclear and particle physics, whose main research focus lies on the theory of strong interaction (quantum thermodynamics, QCD). His works are widely cited, and he has achieved important results whilst researching questions relating to symmetries and structure formation in the physics of hadrons and the atomic nuclei, on studies of quark-gluon matter under extreme conditions as realized in the early universe, and in high-energy nucleus-nucleus collisions, as well as researching highly compressed matter within neutron stars. He is the co-author of influential monographs: “Pions and Nuclei” (1988) and “The Structure of the Nucleon” (2001). Professor Weise studied physics and mathematics up to master’s level (1969) at the Johann Wolfgang Goethe University Frankfurt/Main, gained his doctorate in 1970, and habilitated in 1974 at Erlangen University. After taking two sabbatical years for research purposes in the USA and at CERN, in 1976 he found his calling as a professor at the University of Regensburg. From 1994 onwards, he was a professor for theoretical physics at the TUM until becoming an emeritus professor in 2012. Prolonged research stays and visiting professorships resulted in his visiting, amongst other places, Kyoto University, the Argonne National Laboratory near Chicago, the Institute for Nuclear Theory (INT) and the University of Washington in Seattle, USA, as well as the Institute for Physical and Chemical Research (RIKEN) in Japan. He has been a member of the editorial boards of several scientific journals (Physical Review Letters, Physics Reports, Zeitschrift für Physik, European Physical Journal, Lecture Notes in Physics), as well as a member of numerous advisory boards and committees of national and international research centers. In the years 2000-2004, and again from 2012 until the end of 2015, Wolfram Weise was the director of the European Centre for Theoretical Studies (ECT*) in Trento.

theoretical physics
applied quantum field theory
quantum chromodynamics
hadrons atomic nuclei

- PSSC (Proton Synchrotron & Synchro Cyclotron) CERN Committee (1982-1984)
- GSI Helmholtz Centre for Heavy Ion Research Scientific Advisory Board (1998-2000),
Chairman of the scientific advisory board Rats (1999-2000)
- National Research Centre INFN Frascati Scientific Committee, Italy (2003-2009)
- Yukawa Institute for Theoretical Physics Advisory council, Kyoto University (since 2006)
- Japanese Proton Accelerator Research Complex Program Committee (J-PARC) (since 2012)
- Helsinki Institute of Physics Scientific Advisory Board, Finland (since 2013)
- Institut de Physique Nucléaire Program Advisory Committee, Orsay, France (since 2014)
- Nishina Center Advisory Council, RIKEN, Japan (since 2014)

1965-1969	Studies in physics and mathematics, Goethe University, Frankfurt/Main
1970	Doctorate (Dr. rer. nat.), Erlangen University
1970-1972	Research Assistant, Erlangen University
1973-1975	Research Assistant, State University of New York, Stony Brook, USA
1975-1976	Research Assistant, CERN, Genf
1976-1994	Professor of Theoretical Physics, Regensburg University
1987-1989	Dean, Faculty of Physics, Regensburg University
1994-2012	Professor of Theoretical Physics, TUM
2000-2004/ 2012-2015	Director, European Center for Theoretical Studies in Nuclear Physics and Related Areas (ECT*), Trento, Italy

- A. v. Humboldt - J. C. Mutis Prize by the Spanish Ministry of Science (1995)
- Professor Adjunctus, Nordic Institute for Theoretical Physics (NORDITA), Copenhagen (1991-2006)
- Japan Society for the Promotion of Science Research Fellow Award (JSPS) (2002)
- Giulio Racah Memorial Lecturer, Hebrew University Jerusalem, Israel (2007)
- Emilio Segrè Distinguished Lecturer, Tel Aviv University (2010)



Peter Wilderer is one of Germany's leading experts on hydraulic management. The first German academic to win the Stockholm Water Prize in 2003, he has been awarded countless other honors both within Germany and around the world. The scope of his research reaches from innovative methods of water acquisition and waste water recycling through the ecology of microbial systems to the reclamation of useful material in waste water and other waste products. He was one of the first to recognize the importance of recycling reusable water as a method of containing drought in rapidly growing, large urban areas as well as in the countryside. His call to develop and implement a decentralized solution elicited a positive international response. He is a teacher and researcher who knows how to combine science and knowledge with social commitment. Peter Wilderer approached the public, policy-makers, government and the industry in order to demonstrate how grounded research results and appropriate technologies can lead to sustainable water management. He has been serving as director of the Institute of Advanced Studies on Sustainability in the European Academy of Sciences and Arts since 2002. He was a member of the board of the trustees of TUM's Institute for Advanced Study from 2006 to 2014, for which he organized workshops, research projects and conferences on general scientific and societal issues.

waste management water supply ecology
water acquisition methods microbial systems
waste water recycling hydraulic management

- Member of the International Water Association (IWA) (since 1982)
- Vice president of the Technical University of Hamburg-Harburg (1990)
- Director of the Bavarian Research Association for Waste Management and Recycling Research (BayFORREST) (1991-2003)
- Member of the board of management of the Association of Bavarian Research Cooperations (abayfor) (1996-2003)
- Member of the European Academy of Sciences and Arts (2000)
- Chair of the peer review committee for hydrology and water management of the German Research Foundation (DFG) (2000-2004)
- Board of directors, Huber Technology AG (2000-2007)
- German Institute of Science and Technology (GIST); Master's program on on Industrial Chemistry and Industrial Ecology (2002-2006)
- Co-founder of the European Water Supply and Sanitation Technology Platform (2004)
- Co-founder of the European Water Partnership (2006)
- Fellow of the American Association for the Advancement of Science (AAAS) (2009)
- Visiting professor, University of California, USA (1980-1982)
- Visiting professor, Montana State University, USA (1991)
- Honorary professor, University of Queensland, Australia (2000-2013)

1959-1965	Studies in civil engineering, University of Karlsruhe
1966-1972	Research assistant at the Department of and Institute for Biological Engineering and Biotechnology of Waste Water, University of Karlsruhe
1969	Doctorate in civil engineering, University of Karlsruhe
1972-1980	Senior academic councillor, University of Karlsruhe
1982-1990	Professor, Technical University of Hamburg-Harburg
1991-2004	Professor of water quality and waste technology, TUM

- Honorary doctorate from the Institute of Chemical Technology, Prague, Czech Republic (1997)
- Heinz Maier-Leibnitz Medal from TUM (2003)
- Honorary doctorate from the Gheorghe Asachi Technical University, Iasi, Romania (2003)
- Stockholm Water Prize (2003)
- German Federal Cross of Merit (2004)



After studying physics, Christoph Zenger did his qualification at 35 as a university academic in mathematics, and has been working up to now between the fields of mathematics and information technology. He conducts research in numeric linear algebra and is involved with hierarchical algorithms for the numerical solutions of partial differential equations. Christoph Zenger wrote ground-breaking works on discretisation of differential equations with a reduced number of unknowns on “sparse grids”. These methods are particularly suited to higher dimensional problems, such as those in quantum mechanics and financial mathematics. Christoph Zenger was a co-initiator and first spokesperson of the Bavarian Consortium for High Performance Scientific Computing (FORTWIHR), which considerably furthered the interdisciplinary collaboration among engineers, scientists, mathematicians and IT specialists using supercomputers to conduct application-orientated research in Bavaria. The advancement of highly gifted students to new challenges in the high-tech sector has been of particular interest to him. For many years he was director of the Ferienakademie, which has been held annually by TUM since 1984 in cooperation with the University of Erlangen-Nuremberg and the University of Stuttgart. As well as this, he founded, together with the Russian Academy of Sciences and several universities in St Petersburg, the Joint Advanced Student School (JAS) holiday academy.

supercomputers mathematics applied engineering
differential equations algebra numeric mathematics
sparse grids information technology

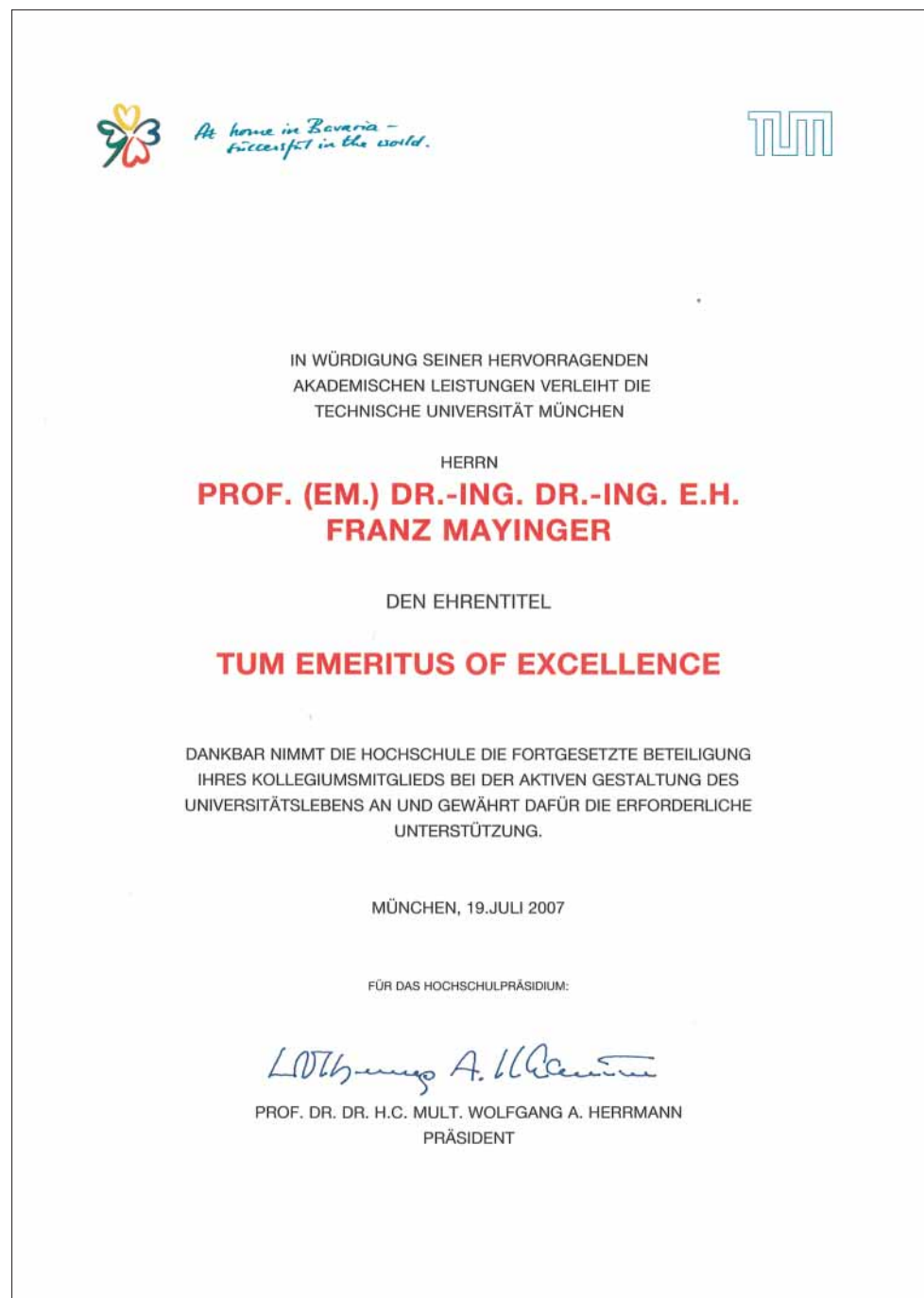
- Member of the board of management of the Leibniz Supercomputing Center, Munich (since 1985)
- Secretary of the Bavarian Academy of Sciences and Humanities commission on information technology (1995)
- Founding spokesperson for the Bavarian Consortium for High Performance Scientific Computing (FORTWIHR) (1992-1995)
- Member of the board of management of Bavarian Consortium for High Performance Scientific Computing (FORTWIHR) (1992-2000)
- Member of the German Research Foundation (DFG) computer committee (1994-2000)
- Member of the Bavarian Academy of Sciences and Humanities (BAdW) (2000)
- Deputy chair of the Commission Forum for Technology of the Bavarian Academy of Sciences and Humanities

- Spokesperson for DFG Collaborative Research Center (SFB) 438: Mathematical modeling, simulation and verification in material related processes and intelligent systems (2000-2002)
- Director of the Holiday Academy Sarntal (south Tyrol) of TUM, Friedrich Alexander University of Erlangen-Nuremberg and the University of Stuttgart (1996-2005)

1959-1964	Studies in physics, LMU Munich
1965-1976	Research assistant at the Leibniz Supercomputing Center, Munich
1967	Doctorate in mathematics, TUM
1976-1980	Academic adviser and professor, TUM
1980-1982	Professor of information technology, University of the German Federal Armed Forces, Munich
1982-2005	Professor of applied engineering in information technology and numeric programming, TUM

- German Federal Cross of Merit (2001)
- Honorary doctorate from Selçuk University, Konya, Turkey (2003)
- Honorary doctorate from St Petersburg State University, Russia (2004)
- Honorary doctorate from Friedrich Alexander University, Erlangen-Nuremberg (2008)





Certificate of appointment by the example of Professor Franz Mayinger as a TUM Emeritus of Excellence

- BMBF**
Bundesministerium für Bildung und Forschung
(Federal German Ministry for Education and Research)
- BMFT**
Bundesministerium für Forschung und Technologie
(Federal German Ministry for Research and Technology)
- CAD**
Computer-aided design
- CERN**
Europäische Organisation für Kernforschung
(European Organization for Nuclear Research)
- CNRS**
Centre nationale de la recherche scientifique, Paris
- EDA**
Electronic design automation
- DFG**
Deutsche Forschungsgemeinschaft
(German Research Foundation)
- DFVLR**
Deutsche Forschungs- und Versuchsanstalt für Luft- und Raumfahrt (German Test and Research Institute for Aviation and Space Flight)
- DLR**
Deutsches Zentrum für Luft- und Raumfahrt e. V.
(German Aerospace Center)
- ETH**
Eidgenössische Technische Hochschule, Zürich
(Swiss Federal Institute of Technology, Zurich)
- FAU**
Friedrich-Alexander-Universität, Erlangen-Nürnberg
(Friedrich Alexander University, Erlangen-Nuremberg)

- FU Berlin**
Freie Universität Berlin
- GDCh**
Gesellschaft Deutscher Chemiker
(German Chemical Society)
- IEEE**
Institute of Electrical and Electronic Engineers
- JASS**
Joint Advanced Student School
- LMU**
Ludwig-Maximilians-Universität München
- MPG**
Max-Planck-Gesellschaft (Max Planck Society)
- NMR**
Nuclear magnetic resonance
- OECD**
Organization for Economic Cooperation and Development
- RWTH**
Rheinisch-Westfälische Technische Hochschule, Aachen
(Rhenish-Westfalian Technical University, Aachen)
- SFB**
Sonderforschungsbereich (Collaborative Research Center)
- TH**
Technische Hochschule (Technical University)
- TU**
Technische Universität (Technical University)
- TUM-IAS**
Institute of Advanced Study of the Technische Universität München

Explanations of honors and awards (Extracts)

Aachen and Munich Prize for Technique and Applied Natural Sciences

Since 1975, this prize has been conferred annually by the Dr. Carl-Arthur-Pastor-Stiftung on an exceptional academic in the fields of sciences and engineering.

AIAA Fellow

The bestowing of the title of AIAA Fellow is one of the highest academic honors of the internationally renowned American Institute of Aeronautics and Astronautics (AIAA).

Akabori Memorial Award

The Japanese Peptide Society has been awarding this prize biennially since 2000 in memory of chemist Shiro Akabori to honor important contributions to research in life sciences.

American Nuclear Society (ANS)

Fellow Members of the ANS can be named a Fellow for exceptional achievement in nuclear sciences or nuclear energy technology.

Albers-Schönberg-Medal

This medal was donated in 1932 in memory of the co-founder of the German Röntgen Society (Deutsche Röntgengesellschaft, DRG), Heinrich E. Albers-Schönberg (1865-1921). It is awarded by the Deutsche Röntgengesellschaft in recognition of exceptional achievement in radiology diagnostics.

Alexander Graham Bell Medal

This medal was donated by the Alcatel-Lucent Bell Labs (USA) in memory of the inventor of the telephone, Alexander Graham Bell (1847-1922), and has been awarded annually since 1976 by the IEEE Board of Directors for exceptional achievement in communications engineering.

Alwin-Walther-Medal

The information technology and mathematics departments of the Technische Universität Darmstadt, together with the Fraunhofer Institute for Computer Graphics Research, confers the Alwin-Walther-Medaille (medal) biennially on exceptional individuals who have paid great service to science.

Architecture Prize from the Bavarian state capital of Munich

Architecture Prize from the Bavarian state capital of Munich: This prize is awarded every three years, in rotation with the prizes for design and art. It honors exceptional lifetime achievement of a Munich architect or team of architects.

Arthur-Burkhardt-Prize

Arthur Burckhardt – engineer, manager and longtime chair of the board of management of Württembergische Metallwarenfabrik (WMF) – established an eponymous foundation to support the sciences and humanities with the goal of placing more importance on the ethical responsibility of the sciences. The foundation has been awarding the Arthur-Burkhardt-Prize since 1984 to scientists whose research connects the sciences and humanities.

ASME Fellow

The title of ASME Fellow is the highest academic distinction the internationally renowned American Society of Mechanical Engineers has to bestow.

Auguste Perret Prize

This prize is conferred triennially by the Union International des Architectes (UIA) for applied technology in architecture. It is named after a former president of the UIA, Auguste Perret (1874-1954).

Award from Stiftelsen Riksbankens Jubileumsfond

Since 1965, the Stiftelsen Riksbankens Jubileumsfond (Bank of Sweden Tercentenary Foundation) has conferred research awards on exceptional scientists; since 1994, this prize has also been awarded to academics in the humanities and social sciences.

Award from the of the Society of Hygiene, Environmental and Public Health Sciences (GHUP)

The Society of Hygiene and Environmental and Public Health Sciences (Gesellschaft für Hygiene und Umweltmedizin, GHUP) awards this prize for particular achievement in environmental medicine and hygiene.

Badge of Honor of the Association of German Engineers (VDI)

The Badge of Honor of the Association of German Engineers (Verein Deutscher Ingenieure, VDI) has been awarded since 1948 as a distinction for deserving volunteers at the VDI.

Bavarian Constitution Medal

The Bavarian Constitution Medal (Bayerische Verdienstmedaille) was established in 1961 by the then president of the state parliament, Rudolf Hanauer, and is one of the most valuable distinctions conferred by the state of Bavaria. It is awarded annually on Verfassungstag (Bavarian constitution day), 1 December, by the president of the Bavarian parliament to individuals who have given “exceptional” (gold) or “special” (silver) service to the constitution of the state of Bavaria. This distinction was elevated by act of law to the rank of an order in 2011.

Bavarian Environmental Award

The Bavarian Environmental Award (Bayerischer Umweltpreis) has been awarded since 1985. It honors exceptional achievement in environmental protection.

Bavarian Maximilian Order for Science and Art

The Bavarian Maximilian Order for Science and Art (Bayerischer Maximiliansorden für Wissenschaft und Kunst) was founded by Max II., King of Bavaria. It is conferred by the Bavarian Prime Minister for exceptional achievement. This honor has been bestowed 185 times. Nevertheless, there may only be 100 living recipients at any one time. The Order is divided into a section for sciences and a section for arts. Today, this award is the highest-ranking honour for science and art in the Free State of Bavaria.

Bavarian Order of Merit

The Bayerischer Verdienstorden is the highest honor for service the Free State of Bavaria can bestow. It is conferred by the Bavarian Minister President as a token of recognition for exceptional service to the Free State of Bavaria.

Bayerischer Architekturpreis and Bayerischer Staatspreis für Architektur

The Bavarian Architecture Prize has been awarded since 2007 by the Bavarian state government and the Bavarian chamber of architects. It honors individuals who have rendered great service to architecture in Bavaria. The prize is conferred biennially on up to three recipients. A single, particularly exceptional achievement may additionally be awarded the Bavarian State Prize for Architecture from the Bavarian state government.

Explanations of honors and awards

Behring-Kitasato-Prize

The Behring-Kitasato Prize was founded by Behring Works AG in 1980 and is awarded biennially by Phillips University Marburg/Lahn for exceptional academic achievement in medicine, veterinary medicine and natural science, particularly for immunology and disease control. It is named after the Nobel Prize winner Emil Adolf von Behring and Japanese physician and bacteriologist Shibasaburo Kitasato, who laid the foundations for serum therapy with their collaborative research from 1890 on.

Bergey Medal

In conferring the Bergey Medal and the Bergey Award, Bergey's Manual Trust honors individuals who have made an important contribution to bacteriological taxonomy. These awards are funded by the trust together with Springer Verlag. The trust was founded in 1936 in order to ensure the publication of Bergey's Manual of Determinative Bacteriology.

Boris Rajewski Medal

Since 1972, this annually awarded medal is the highest distinction the European Society of Radiology can bestow. The medal is named after the founder of the ESR, Boris Rajewski (1893-1974)

Burckhardt-Helferich-Award

The Institute for Organic Chemistry at the Universität Leipzig has awarded this prize, which is named after the chemist Burckhardt Helferich (1887-1982) annually for exceptional achievement in bio-organic chemistry.

Cantor Medal

The Cantor-Medal from the Deutsche Mathematiker-Vereinigung is named in honor of Georg Cantor, the first president of the DMV. It is awarded at most every second year. The prize winners are mathematicians who are associated with the German language.

Commandeur de l'Ordre des Palmes Académiques

This is the highest order for service in the French education system that the Republic of France can bestow. It is awarded in the class of Chevalier, Commandeur and Officier.

Explanations of honors and awards

Dannie Heineman Prize for Mathematical Physics

The American Institute of Physics and the American Physical Society (APS) award this prize annually for important contributions to mathematical physics. Dannie Heineman, electrical engineer and director of the engineering company Sofina, established the prize in 1959. It is considered to be one of the highest distinctions in the world of mathematical physics.

Den Grønne Nål

This prize is conferred on an irregular basis by the Danish Architects' Association in recognition of particular achievement in architecture.

Dieffenbach Medal

Awarded by the Vereinigung der Deutschen Plastischen Chirurgen (Association of German Plastic Surgeons), the Dieffenbach Medal was created by artist Fritz Becker. It was awarded for the first time in 1989 and named after Johann Friedrich Dieffenbach (1792-1847).

Distinguished Educator Award

The award is conferred on a member of the IEEE Microwave Theory and Techniques Society for exceptional teaching in this field.

Distinguished Service Award

This award recognizes an individual who has rendered outstanding service to the European microwave community and, in particular, for the advancement of the European Microwave Association.

EDA-Medal (electronic design automation)

Edacentrum has been presenting this award annually since 2002 in order to recognise the lifetime achievement of an individual who has rendered particular service to electronic design automation.

EDDA Lifetime Achievement Award

The European Design and Automation Association awards this prize annually to an exceptional scientist who has made a lasting mark on the field of electronic design automation.

E. K. Frey - E. Werle Gedächtnismedaille

The E.K. Frey-E. Werle Stiftung, founded by the Henning L. Voigt family, is named after the two scientists who discovered the kallikrein-kinin system, and confers this award on scientists who have made exceptional contributions to the understanding of the kallikrein-kinin system or a related area and thereby exercised significant influence on this field.

Emil-Fischer-Medal

This medal is conferred every two to three years by the German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh) in honor of the Nobel Prize winner Herrmann Emil Fischer (1852-1919) for exceptional work in organic chemistry. The award is considered the highest distinction for organic chemists in Germany.

Emil-von-Behring-Medal

The Emil-von-Behring-Medal has been awarded biennially since 1942 by Phillips University Marburg and is considered to be one of the most important distinctions in the German science world. The medal is named after the German Nobel Prize winner in medicine Emil von Behring and is awarded in his memory to scientists who have rendered particular service to immunobiology and disease control. The €25,000 prize money is sponsored by Novartis Behring.

ERC Advanced Investigators Grant

The European Research Council awards these grants to leading established researchers to support innovative, high-risk projects that open new directions in their respective research fields.

Ernest Solvay Prize

This prize has been conferred biennially since 1982 by the Ernest-Solvay-Stiftung (foundation) on a scientist not working in a commercial research center. Named after the chemist and businessman Ernest Solvay (1838-1922), it awards important achievements in chemical engineering or process engineering.

Ernst-Blickle Award

The Ernst-Blickle Award is one of the most highly endowed of all prizes for individuals in Europe. It is awarded biennially by the SEW (Süddeutsche-Elektromotoren-Werke – South German electric motor works)-Eurodrive Foundation in memory of the longtime managing director of SEW-Eurodrive GmbH and Co KG, Ernst Wilhelm Blickle, for outstanding scientific achievement in business and technology.

European Award for Architecture and Technology

This highly endowed prize was conferred in 2003 and 2006 by Messe Frankfurt GmbH for exceptional international achievement in architecture and engineering.

Feldberg Award

The Feldberg Foundation was established by Wilhelm Feldberg in 1961 to foster professional dialog between medical researchers in Germany and England. This annual award honors one German and one English scientist for outstanding scientific achievement.

Ferdinand Cohn Medal

The Ferdinand Cohn Medal is given in honor of Ferdinand Cohn, the founder of systematic bacteriology, by the Deutsche Gesellschaft für Hygiene und Mikrobiologie e. V. (German Society of Hygiene and Microbiology), and is awarded annually for exceptional scientific achievement.

First Rosa Barba European Landscape Prize

The Rosa Barba European Landscape Prize is awarded at the European Biennial of Landscape Architecture in Barcelona. It is funded by Spanish academic organizations in order to support landscape architecture in Spain.

Fraunhofer-Medal

With this medal, the Fraunhofer-Gesellschaft honors people for their outstanding service to the Fraunhofer-Gesellschaft. The medal was designed on the occasion of the 200th birthday of Joseph von Fraunhofer in March 1987.

Fresenius-Prize

The German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh) founded this prize in 1961 in memory of the chemist C. Remigius Fresenius (1818-1897). The prize is bestowed on individuals who have rendered particular service to scientific development and have furthered the field of analytical chemistry.

Friedrich-Ludwig-von-Sckell-Ring of Honor

The Bavarian Academy of Fine Arts honors outstanding landscape architects with the biannual Sckell Ring. The award is named after the landscape architect Friedrich Ludwig von Sckell (1750-1823; designer of the English Garden in Munich).

Explanations of honors and awards

Friedrich-Robert-Helmert-Gedenkmünze

The Friedrich-Robert-Helmert-honorary-medal from the Society for Geodesy, Geoinformation and Land Management (Gesellschaft für Geodäsie, Geoinformatik und Landmanagement, DVW) is awarded to notable geodetic scientists at very special events. It is the highest honor the DVW has to bestow, and has been awarded only 13 times since 1871.

Fritz-Schumacher-Prize

This prize is awarded triennially in memory of the Werkbund (German Work Federation) architect Fritz Schumacher (1869-1947) by the Hamburg Senate and the Alfred Toepfer Stiftung F.V.S. by mutual agreement with the Fritz-Schumacher-Gesellschaft (Fritz Schumacher Society).

General Pierre Nicolau Award

The CIRPE – International Academy for Production Engineering – confers this award in memory of its founder. The prize is awarded annually to individuals who have made important contributions to production technology.

Georg-Schlesinger Prize

The Georg-Schlesinger prize is named after the founder of modern scientific research in business and manufacturing engineering. It has been awarded every three years since 1979 to honor exceptional achievement in manufacturing engineering that makes a social or humanitarian contribution.

German Cancer Aid Award

The German Cancer Aid Award is the highest distinction German Cancer Aid can bestow. It dates from an inheritance German Cancer Aid received in 1995 and is conferred annually.

German Federal Cross of Merit (Verdienstorden der Bundesrepublik Deutschland)

The German Federal Cross of Merit is awarded for achievements in the areas of politics, economics, culture, humanities or voluntary service. The following classes of the order may be bestowed: Verdienstmedaille (Medal of Service), Verdienstkreuz am Band (Cross of Service on a Ribbon), Verdienstkreuz I. Klasse (Cross of Service 1st Class) and Großes Verdienstkreuz (Grand Cross of Service).

Explanations of honors and awards

Global Award for Sustainable Architecture

The Locus Foundation and the Cité de l'architecture & du patrimoine Paris award this annual prize, which was established in 2007 by architect Jane Revedin, to five architects in order to honor innovative planning that is both socially responsible and ecologically sustainable.

Gold Honorary J. Heyrovský Medal

Named after the Czech Nobel Prize winner Jaroslav Heyrovský, this medal is awarded by the Academy of Sciences of the Czech Republic for special achievement in chemistry.

Grashof-Denk Münze

This is the highest honor the Association of German Engineers (Verein deutscher Ingenieure, VDI) has to bestow. The Grashof Honorary Medal is named after the co-founder and first director of the VDI, Franz Grashof. It was established in 1894 and has since then been awarded to engineers who have made outstanding scientific or professional contributions to engineering.

Green Good Design Award

The European Center for Architecture Art Design and Urban Studies, together with the Chicago Athenaeum: Museum of Architecture and Design, presents this award for visionary concepts on ecological sustainability.

Georg C. Laurence Pioneering Award

The award was established in 1988 by the Nuclear Installations Safety Division (NISD) to recognize lifetime achievements in the development of reactor safety philosophy. These are individuals who have made outstanding pioneering contributions to the field of nuclear reactor safety.

Gold Medal from the Association of German Architects (BDA)

Since 1964, this gold medal is conferred triennially, along with the Grand Prize from the Association of German Architects (Bund Deutscher Architekten, BDA), for important achievements in architecture or urban development.

Gold Medal from the British Royal Aeronautical Society

The Royal Aeronautical Society has been honoring outstanding achievers in the global aerospace industry since 1909. Since 2004 the Society has also periodically awarded team medals (Gold, Silver, and Bronze) for exceptional or groundbreaking team work in aeronautical research and development.

This prize is the most highly endowed German grant from the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG) for exceptional, cutting-edge research. It is named after the great philosopher, polymath and mathematician Gottfried Wilhelm Leibniz (1646-1716). Up to ten prizes may be awarded annually.

Grande Médaille de l'Urbanisme

This medal is conferred by the internationally renowned Académie d'Architecture (France) for exceptional achievement in architecture.

Grande médaille d'or from the Académie d'architecture

This medal is the highest distinction the internationally renowned Académie d'Architecture (France) has to offer. It is awarded for particularly excellent achievement in architecture.

Hall of Fame of German research

The German research Hall of Fame was created in 2009 by manager magazin. Scientists who have demonstrated outstanding lifetime achievement in the further development of German research are accepted annually into the Hall of Fame. The two-step acceptance procedure begins with the nomination by a board of professionals, after which an independent judging panel of leading scientists choose the winner. The purpose of the Hall of Fame is to improve communication between science and business in Germany as well as publicising the chosen researchers' success.

Hans Herloff Inhoffen Prize

Named after the chemist Hans Herloff Inhoffen (1906-1992), this prize for scientists is awarded by Schering AG. The German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh) accepts the applications for it.

Hans-Kudlich-Award, Ecosocial Forum Austria

The ecosocial forum of Austria awards this prize in memory of Hans Kudlich (19th-century political activist who worked to end feudalism and forced servitude in Austria) for special contributions to rural areas.

Hanns Langendorff Prize

The Hanns Langendorff Foundation awards the eponymous medal and prize together with the German society for medical radiation protection (Deutsche Gesellschaft für Medizinischen Strahlenschutz). The has been conferred since 1979 in memory of Hanns Langendorff on young scientists active in radiation biology and radiation protection.

Hanns Martin Schleyer-Prize

On the occasion of the fifth anniversary of the death of Hanns Martin Schleyer, Daimler Benz AG (today: Daimler AG) founded this prize in 1982 to honor exceptional "services for the consolidation and support of the foundation of a free commonwealth". The annual conferral of the prize as well as the choice of winners was transferred to the Hanns Martin Schleyer Foundation.

Heinz Maier-Leibnitz Medal from TUM

This award is named after Prof Heinz-Maier Leibnitz (1911-2000), the father of German neutron physics and one of the most important scientists at the Technische Universität München. This distinction has been awarded since 1997 by TUM for exceptional academic service.

Henri Poincaré Prize

The Henri Poincaré Prize sponsored by the Daniel Iagolnitzer Foundation was created in 1997 to recognize outstanding contributions in mathematical physics, and contributions which lay the groundwork for novel developments in this broad field. The prize is awarded to three individuals every three years at the International Congress on Mathematical Physics. The prize committee is appointed by the International Association of Mathematical Physics (IAMP).

Herbert-Höhler-Needle

This needle – in honor of Herbert Höhler, pioneer of cosmetic surgery in Germany – has been awarded since 2004 by the Association of German cosmetic and plastic surgeons (Vereinigung der Deutschen Ästhetisch Plastischen Chirurgen, VDÄPC) for outstanding contributions to cosmetic surgery.

Honorary Needle from the Association of German Engineers (VDI)

Honorary needle from the Association of German Engineers (Verein deutscher Ingenieure, VDI) – this needle was conferred for the first time in 1860 as an expression of honorary membership of the VDI and it is a distinction for individuals who have rendered particular service to the VDI and the vocation of engineering.

Honorary Needle from the German Association of water management, waste water and waste

Honorary needle of the German Association of water management, waste water and waste – this needle is awarded annually to deserving association members.

Explanations of honors and awards

Honorary needle from the German Society for Aeronautics and Astronautics (DGLR)

This honorary needle from the German Society for Aeronautics and Astronautics (Deutsche Gesellschaft für Luft und Raumfahrt, DGLR) is awarded "for outstanding service of a team toward the development of aeronautics".

HUPO Distinguished Achievement Award in Proteomics

The Human Proteome Organization awards this prize to scientists to honor their outstanding contribution to proteomics.

IEEE Fellow

Receiving the title of IEEE Fellow is the highest academic honor the internationally renowned Institute of Electrical and Electronic Engineers has to bestow. This honor is conferred annually on no more than 0.1 per cent of the IEEE members.

International Architecture Award

These renowned prizes were established by the Chicago Athenaeum: Museum for Architecture and Design in 2005 to recognize globally outstanding works in contemporary architecture, landscape architecture, interiors and urban planning. The awards are conferred by the Chicago Athenaeum: Museum of Architecture and Design and the European Center for Architecture Art Design and Urban Studies.

International E.H. Armstrong-Award

This distinction is awarded annually by the IEEE Communications Society to members who have contributed exceptional achievement in communications technology. It was founded and is funded by the Armstrong Memorial Research Foundation in memory of the American inventor and electrical engineer E.H. Armstrong (1890-1954).

Josef Rudinger Award

The European Peptide Society biennially confers this prize in honor of the chemist Josef Rudinger (1924-1974) for exceptional professional achievement in peptide chemistry.

Karl Heinz Beckurts Prize

The Karl Heinz Beckurts Foundation awards this prize for exceptional scientific and technical achievements that have inspired industrial innovation in Germany. The foundation was established in 1978 by the Hermann von Helmholtz Society of German Research Centers (Hermann von Helmholtz Gemeinschaft deutscher Forschungszentren) in memory of the physicist and businessman Karl Heinz Beckurts (1930-1986).

Explanations of honors and awards

Karl-Küpfmüller-Prize

This prize is awarded every four years by the IT Society (Informationstechnische Gesellschaft) in the Association for Electrical, Electronic and Information Technologies (Verband der Elektrotechnik, Elektronik, Informationstechnik e. V., VDE). It is conferred on an academic in honor of the engineer Karl Küpfmüller as the highest academic distinction the society can bestow.

Keilin Medal

The awards committee selects a lecturer to deliver the annual Keilin Memorial Lecture on a topic selected also by them. The award has been conferred since 1964 in honor of the British biologist David Keilin on scientists working in bioenergetics, electron transfer and mitochondrial biology.

Körber European Science Prize

The Körber European Science Prize honors outstanding and excellent scientists working in Europe. The prize is awarded to research projects that show great potential for possible application and international impact.

Leo von Klenze Medal

This medal has been awarded since 1996 by the supreme building authority of the Bavarian State Ministry of the Interior for exceptional achievement in architecture, home and urban construction as well as civil engineering. It commemorates the architect Leo von Klenze (1784-1864).

Leonard Eisenbud Prize for Mathematics and Physics

The American Mathematical Society (AMS) has been presenting this prize in honor of Leonard Eisenbud (1913-2004) every three years since 2008 for outstanding scientific achievement that brings mathematics and physics closer together.

Leonardo da Vinci Award

The American Society of Mechanical Engineers (ASME) has been awarding this prize annually since 1978 for outstanding achievement in the development or discovery of a product considered an important advancement in machine design.

Levallois Medal

The Levallois Medal is presented by the International Association of Geodesy (IAG) every four years "The Levallois Medal is presented by the International Association of Geodesy (IAG) every four years "in recognition of distinguished service to the association and/or to the science of geodesy in general".

Linus Pauling Medal

This medal is awarded by the American Chemical Society for outstanding achievement in chemistry. The award was named after its first recipient, chemist Linus Pauling (1901-1994), a two-time Nobel Prize winner.

Ludwig-Prandtl-Ring from the DGLR

This is the highest award the German Society for Aeronautics and Astronautics (Deutsche Gesellschaft für Luft- und Raumfahrt, DGLR) has to confer. It is awarded for "outstanding individual work in aerospace sciences in all disciplines".

Lwoff Award

The Federation of European Microbiological Societies (FEMS) has been conferring this award since 2000 on individuals who have made important contributions to microbiology in Europe. The award is named for the first president of FEMS: André M. Lwoff.

Marian Smoluchowski-Emil Warburg Physik Prize

The Polish and German physical societies jointly award this prize for outstanding contributions to pure or applied physics. The award honors the memory of Polish physicist Marian Smoluchowski and German physicist Emil Warburg. It is dedicated to a Polish and German physicist respectively every two years on an alternating basis.

Max-Bergmann Medal

The Max Bergmann Circle (Max Bergmann Kreis, MBK) for the support of research in peptide chemistry exists since 1980. It confers the Max Bergmann medal for Peptide Chemistry on an exceptional exponent of international research. The medal commemorates the chemist Max Bergmann (1886-1944).

Max Jakob Memorial Award

This prize – named after the pioneer of the science of heat transfer, Max Jakob (1879-1955) – has been awarded annually by the American Society of Mechanical Engineers (ASME) since 1961 in recognition of extraordinary achievement in this field.

Max-Planck-Medal

This medal is the highest honor the German Physical Society (Deutsche Physikalische Gesellschaft, DPG) can bestow for exceptional achievement in theoretical physics. It has been awarded annually since 1929 for contributions that stem from the work of physicist Max Planck (1858-1947)

Max Planck Research Award

The Max Planck Research Award for international co-operation supports German and international scientists who are already recognized in their field and from whom further exceptional scientific work, within the scope of international collaboration, can be expected. Alternating by year, the Max Planck Research Award is awarded to the area of natural and engineering sciences, life sciences or the humanities. The Federal German Ministry of Education and Research makes funding for this program available to the Max Planck Society and the Alexander von Humboldt Foundation.

Max Tishler Prize

Harvard University's Department of Chemistry and Chemical Biology presents this award in memory of US pharmacologist Max Tishler (1906-1989) to scientists who have made exceptional achievements in chemistry.

Mechanics and Control of Flight Award

The American Institute of Aeronautics and Astronautics confers this award annually for exceptional achievement in the flight control and guidance of aerospace transport systems.

Medal "München leuchtet – Den Freunden Münchens"

Munich, the capital of Bavaria, has been presenting this official award, "Munich shines – for friends of Munich", in gold, silver and bronze since 1961 to honor special contributions to Munich

Mies van der Rohe Award

The Mies van der Rohe Award for European Architecture was established in 1987 by the European Commission, the European Parliament and the Mies van der Rohe Foundation in Barcelona. It commemorates the architect Mies van der Rohe (1886-1969) and is conferred every two years.

Nobel Prize

Founded by the Swedish inventor and industry magnate Alfred Nobel, this prize has been awarded annually on 10 December – the date he died – since 1901. Nobel left his fortune to a foundation so that the interest could be used to award "prizes to those who, during the preceding year, shall have conferred the greatest benefit to mankind". He designated that the money should be distributed among five fields: chemistry, physics, physiology or medicine, literature and the promotion of peace. The Nobel Prize is still considered to be the world's highest honor in all of those areas. Since 1968, together with the Nobel Prizes, the Swedish Riksbank also awards a prize in memory of Alfred Nobel for business studies.

Explanations of honors and awards

Order of the White Rose

The Order of the White Rose is the highest accolade Finland has to bestow and is awarded in classes such as the Grand Cross, Commander and Commander 1st Class, Knight and Knight 1st class. It was established in 1919 and honors Finnish or international citizens for civilian service to Finland. During time of war it can also be awarded for courage in the face of the enemy.

Ordre de la Légion d'honneur

The French Legion of Honor is the highest distinction of the Republic of France. It is conferred to distinguish particular achievement in politics, economics, sciences and culture and is awarded in the following classes: Chevalier, Officier, Commandeur, Grand Officier, Grand-croix, Grand Maître.

Otto Bayer Award

Established in 1984, the Otto Bayer Award was funded by Prof Dr Otto Bayer (1902-1982), who was for many years the director of research at Bayer AG. It is conferred biennially by the Bayer Science and Education Foundation on a scientist for exceptional research achievements in directional areas of chemistry and biochemistry.

Otto Hahn Prize

The city of Frankfurt/Main funded this award in memory of its honorary citizen and Nobel Prize winner Otto Hahn (1879-1968). Since 2005, it has been awarded to a scientist biennially in collaboration with the German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh) and the German Physical Society (Deutsche Physikalische Gesellschaft, DPG).

Otto-Lilienthal-Medal

The Otto-Lilienthal-Medal is awarded by the German Society for Aeronautics and Astronautics (Deutsche Gesellschaft für Luft und Raumfahrt, DGLR) "for exceptional scientific achievement in engineering, in product implementation or design in aeronautics".

Otto Lilienthal Prize

The honor of this prize has been awarded since 2004 by the state of Berlin-Brandenburg in memory of Otto Lilienthal (1848-1896), entrepreneur, scientist and pioneer of scientific aerodynamics.

Explanations of honors and awards

Otto Warburg Medal

The Otto Warburg Medal has been awarded by the Society for Biochemistry and Molecular Biology (Gesellschaft für Biochemie und Molekularbiologie, GBM) since 1963 for outstanding achievement in biochemistry. The award is named after the German biochemist and physiologist Otto Warburg, who was awarded the Nobel Prize in 1931 for physiology or medicine. Awarded annually, the medal is considered to be one of the highest hon-ors in German biochemistry. To date, seven winners of the Otto Warburg Medal were later also awarded a Nobel Prize.

Philip Morris Research Award

This research award was awarded from 1982 to 2007 first by the German subsidiary of the tobacco corporation Philip Morris, then from 1988 by the Philip Morris Foundation, created for this purpose. It honored exceptional scientific work.

Pioneer Award

The IEEE Microwave Theory and Techniques Society confers the Microwave Pioneer Award to honor outstanding, ground-breaking scientific achievement that has furthered its respective field. The publication of the discoveries should predate the bestowal of the award by at least 20 years.

Place Planning Award

The Environmental Design Research Association (EDRA) has been conferring Great Places Awards in the categories of planning, design, research and books since 1998 to outstanding design projects.

Premio Architetture Rivelate

The chamber of architecture in Turin has been awarding the Premio Architetture Rivelate – award for displayed architecture – to works of contemporary architecture in and around Turin that help improve their environment. A sign on the award-winning buildings informs the public of these examples of good architecture.

Prize from the Federation of German Landscape Architects (BDLA)

The Association of German Landscape Architects (Bund Deutscher Landschaftsarchitekten, BDLA) bestows this award biennially to distinguish projects and their creators in the areas of contemporary socially and ecologically orientated open spaces and landscape planning.

Prize from the Information Technology Society (ITG) in the VDE

The Information Technology Society (Informationstechnische Gesellschaft, ITG) in the Association for Electrical, Electronic and Information Technologie (Verband Elektrotechnik, Elektronik, Informationstechnik e. V., VDE) confers this award annually on its members for exceptional academic publications on information technology.

Pro Meritis-Medal

Up to fifteen individuals may be presented with this medal from the Bavarian Minister of Sciences, Research and Arts. It has been awarded annually since 1999 for exceptional work within the fields governed by this ministry.

Pro Meritis SCIENTIAE ET LITTERARUM Award

The Pro Meritis SCIENTIAE ET LITTERARUM has been awarded annually since 2000 by the Bavarian Ministry of Sciences, Research and Arts to no more than eight individuals who have provided exceptional service in the areas of research, culture, sciences and the arts.

Ring of Honor of the Association for Electrical, Electronic and Information Technologies (VDE)

The VDE-Ring of Honor – the highest distinction awarded by the Association for Electrical, Electronic and Information Technologies (Verband der Elektrotechnik, Elektronik und Informationstechnik e. V., VDE) – is awarded for exceptional scientific and technical achievement, which has provided fundamental new knowledge to electrical engineering or has significantly furthered the field either scientifically or technically.

Ritter-von-Gerstner-Medal

Named after German-Bohemian mathematician and physicist Franz Joseph Ritter von Gerstner, this medal has been awarded by the Sudeten-German Territory Association (Sudentendeutsche Landsmannschaft) since 1976 to deserving scientists with a Sudeten-German background.

Röntgen Medal from the city of Remscheid

This badge, funded since 1951 by the city of Remscheid, is conferred annually on individuals who have rendered outstanding services in the advancement and circulation of Wilhelm Conrad Röntgen's discoveries in theory and in practice.

Royal College of Surgeons of Edinburgh

The Edinburgh Royal College of Surgeons was founded in 1505 and is one of the oldest associations of surgeons in the world.

Rudolf Pichlmayr-Medaille

This medal is an honor bestowed by the German Society of General and Visceral Surgery (Deutsche Gesellschaft für Allgemein- und Viszeralchirurgie, DGAV) and is awarded to individuals who have provided exceptional service for the DGAV. It commemorates the surgeon Rudolf Pichlmayr (1932-1997)

Schweighofer Main Prize

The Schweighofer Prize is donated by the Austrian Schweighofer family, who has been engaged in the European woodworking industry for generations. The Schweighofer Prize awards innovative ideas, technologies, products and services in order to strengthen the competitiveness of the European Forest Based Sector. The Main Prize awards people who have shown outstanding performance for the European Forest Based Sector over an extended period of time. The Main Prize is endowed with € 100,000.–

Sebastian-Kneipp-Award

The Sebastian-Kneipp-Foundation (Sebastian-Kneipp-Stiftung) awards this prize for scholarly works that present new findings about Kneipp therapy in medical and pharmaceutical sciences and research.

Senior Research Award from the European Association of Structural Dynamics

The European Association for Structural Dynamics has been conferring a junior and senior research award since 2005 on members or participants in its conference. The prizes are awarded every three years in three respective categories to honor outstanding and sustainable professional discoveries.

Science Prize from the Information Technology Society (ITG)

This prize honors outstanding personal or technical/scientific achievements that either contribute to a substantial expansion of basic knowledge in communications and information technology, or have decisively supported the scientific or technological aspect of information technology as part of a large body of work. Presented every four years, it awards the recipient €5,000.

Explanations of honors and awards

Silber Medal of Honor, Salzburg state

This medal of honor from the state of Salzburg is, along with the Ring of the state of Salzburg, one of the state's highest honors. The award was issued in seven classes until 2007 (Grand Cross; Great, Golden, Silver Medal; Gold and Silver medal of service). After 2007, the five lowest levels were replaced by the medal of honor, grand service medal and the service medal.

Silver Commander's Cross for services to Lower Austria

The Silver Commander's Cross for services rendered to the state of Lower Austria is the most significant honor that the federal state of Lower Austria has to bestow. The prize is awarded in three classes (cross, star, medal) and 12 levels.

Sir Hans Krebs Medal

The Sir Hans Krebs Lecture and Medal are endowed by the Lord Rank Center for Research and are awarded for outstanding achievements in biochemistry and molecular biology. The award winner presents a plenary lecture during the annual Federation of European Biochemical Societies (FEBS) conference.

Society Award from the Information Technology Society (ITG)

As a member organization of the Association for Electrical, Electronic and Information Technologies (Verband der Elektrotechnik, Elektronik, Informationstechnik e. V., VDE) the ITG has been conferring this award every four years since 2008 for exceptional achievement in the field.

Soldnermedaille of the Bavarian State Ministry of Finance

The Bavarian State Ministry of Finance awards the Soldner medal for special service to the Bavarian surveying authority.

Staatsmedaille für Verdienste um Umwelt und Gesundheit des Freistaats Bayern (State medal for services to the environment and health of the free state of Bavaria)

This award was conferred annually between 2004 and 2008 by the Bavarian State Ministry for the Environment and Health. Up to 30 individuals could receive this award for services rendered to protect the environment, health or consumers. In 2009, this award was separated into two distinct prizes: the Bayerische Staatsmedaille für Verdienste um die Umwelt and the Bayerische Staatsmedaille für Verdienst um die Gesundheit (Bavarian state medals for services to the environment/to health).

Explanations of honors and awards

Staatsmedaille in Gold from the Bavarian State Ministry of Nutrition, Agriculture and Forestry

The Bavarian Ministry of Food, Agriculture and Forestry has been awarding this medal in gold, silver and bronze since 1951 for exceptional achievement in nutrition, agriculture and forestry.

Steel Innovation Prize

The Steel Innovation Prize has been awarded every three years since 1989 by the Stahl-Informationen-Zentrum (a conglomerate of steel producing and processing companies). The award is designed to support innovation in steel products and help make them well known. It is conferred in four different categories.

Stern-Gerlach-Prize

As the highest honor the German Physical Society (Deutsche Gesellschaft für Physik) can bestow, this medal is awarded for exceptional achievement in experimental physics. It covers work in all areas of physics and named after the physicists Otto Stern (1888-1969) and Walther Gerlach (1889-1979).

Stockholm Water Prize

Established by the Stockholm Foundation in 1990, the Stockholm Water Prize (known also as the “Water Nobel Prize”) is awarded annually for exceptional achievement in hydraulic research and management as well as corresponding initiatives and public works.

Thannhauser-Medal and Thannhauser-Prize

The Thannhauser-Medal and Thannhauser-Prize are awarded respectively every two years (in alternation) by the German Society of Digestive and Metabolic Disorders (Deutsche Gesellschaft für Verdauungs- und Stoffwechselkrankheiten, DGVS) at the society’s annual conference. The medal and prize commemorate Siegfried Thannhauser (1885-1962), who was a doctor of internal medicine and an academic.

Tiroler Adlerorden in Gold

The gold Tyrolean Order of the Eagle honors individuals whose visit or stay in Tyrol or excellent friendly relationship to the state of Tyrol has a special political, economic or cultural significance for the state of Tyrol. There are three classes of the order: Großer Tiroler Adler-Orden (Grand Tyrolean Order of the Eagle), Tiroler Adler-Orden in Gold and Tiroler Adler-Orden in Silber (Tyrolean Order of the Eagle in gold and silver).

Tomassoni Prize

The Premio Felice Pietro Chisesi e Caterina Tomassoni is conferred annually by La Sapienza University, Rome on important international academics of physics.

Tommy Thompson Award for Reactor Safety

This prize has been awarded since 1980 by the Nuclear Society’s Nuclear Installations Safety Division (formerly Nuclear Reactor Safety Division) in order to honor individuals who have rendered particular service to reactor safety. It is awarded as a memorial to Theos J. “Tommy” Thompson in recognition of his significant contributions to nuclear reactor safety.

Triangle d’or of the ENPC

Triangle d’or of the ENPC (École Nationale des Ponts et Chaussées), one of the French “Grandes Écoles” for construction engineering, awards this distinction for particular professional achievement.

Unternehmer-Ehrenzeichen of the Kuratorium der Bayerischen Wirtschaft

The Board of Trustees of Bavarian Commerce awards this distinction on an irregular basis to individuals who have rendered particular service to the Bavarian economy.

Vening Meinesz Medal

This medal has been awarded by the European Geophysical Society since 1997 in memory of Vening Meinesz’s scientific achievements and outstanding research in geodesy.

Verdienstorden für Kunst und Wissenschaft of the Republic Austria

This medal for service in arts and sciences is the highest accolade the Republic of Austria has to confer for achievements in the sciences or arts in Austria or internationally.

Vincent du Vigneaud Award

The American Peptide Society awards this prize biennially for exceptional achievement in peptide research. The award is named after Nobel Prize winner in Chemistry Vincent du Vigneaud (1901-1978).

Werner-Heisenberg-Medal

This medal, awarded by the Alexander von Humboldt Foundation, is named after its longtime president (1953-1975), physicist and Nobel Prize winner Werner Heisenberg.

Willis E. Lamb Award for Laser Science and Quantum Optics

This award is sponsored by the Physics of Quantum Electronics (PQE) conference and presented at its annual winter colloquium. The prize honors outstanding scientific achievement in its field, and is named after the 1955 Nobel Prize winner in Physics, Willis E. Lamb.

Wolfgang_Ostwald_Prize

The Deutsche Kolloid-Gesellschaft (colloid society) awards this prize to scientists for outstanding lifetime achievement in pure or applied colloid science. The award is named after the scientist Wolfgang Ostwald (1883-1943).

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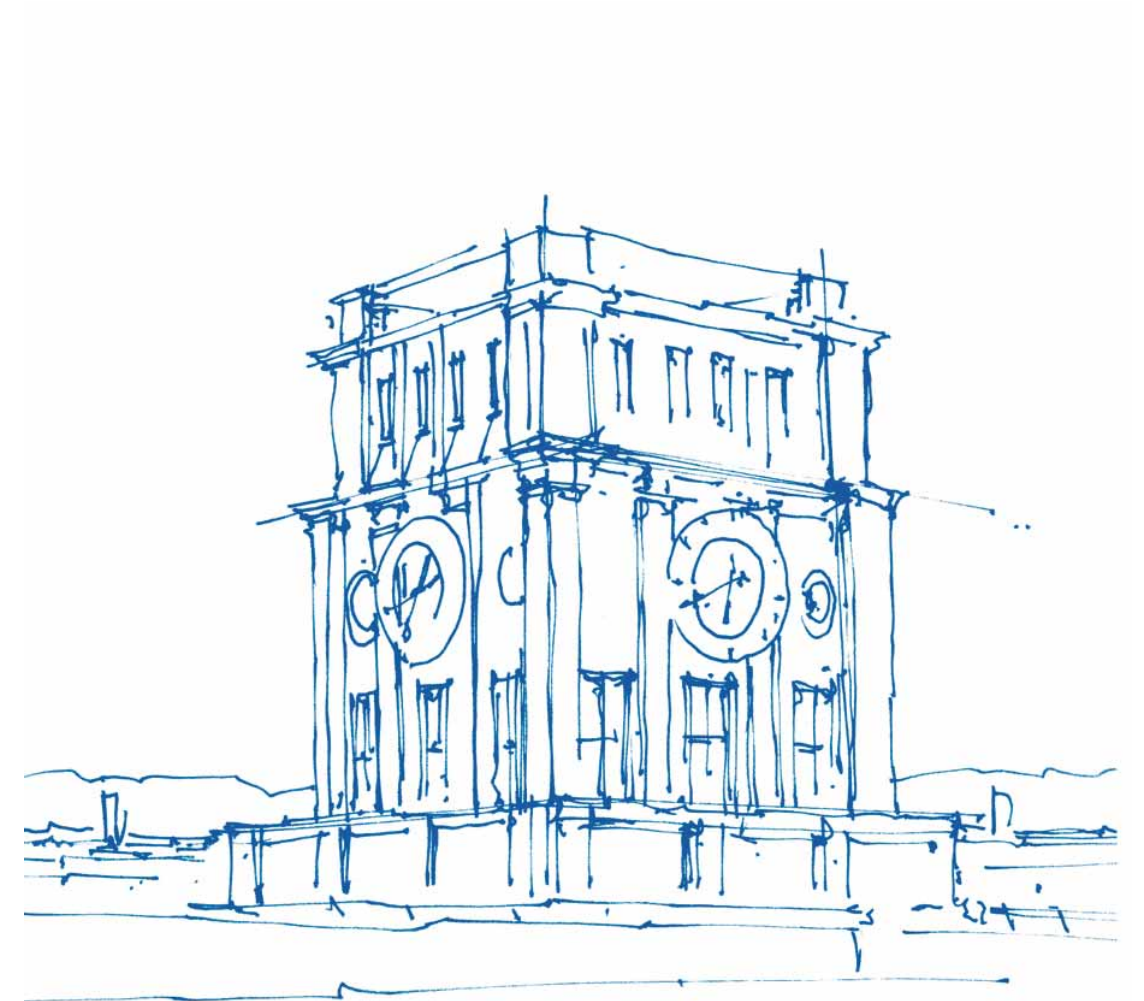
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