



# **Nomination Guidelines for Fellowships**



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# **Opportunities at the TUM Institute for Advanced Study**

#### **Fellowships**

The Technical University of Munich has established its Institute for Advanced Study (TUM-IAS) with the goal of creating fields of excellence in "Science and Technology". Embedded in a comprehensive technical university, TUM-IAS seeks to promote research in fields ranging from natural and applied sciences, life sciences and medicine to all areas of engineering as well as Social Sciences and Humanities, many of which are strongly influenced by modern science. TUM-IAS awards Fellowships to distinguished researchers and gives them the necessary time and financial support to explore new venues, to develop novel research areas, especially at the border between classical disciplines, and to establish intensive international collaborations as well as collaborations with industry.

The main program at TUM-IAS is the Fellowship program, summarized in the following picture:



Albrecht Struppler Fellowship for outstanding early-career physicians from TUM School of Medicine, TUM University Hospital or German Heart Centre Munich

Anna Boyksen Fellowship for outstanding top-level female professors who intend to explore genderand diversity-relevant themes in the context of the TUM subject portfolio

Carl von Linde Fellowship for excellent TUM faculty members



Hans Fischer Senior Fellowship for outstanding international scientists Hans Fischer Fellowship for outstanding international early-career scientists

Rudolf Diesel Industry Fellowship for highly qualified researchers from industry

Rudolf Mößbauer Tenure Track Professorship for outstanding, high-potential early-career scientists

TUM Global Visiting Professor Program

Visiting Fellowship for Alumni Fellows

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The Fellowships offered by TUM-IAS are subdivided into seven categories. With these programs, TUM-IAS seeks to attract scholarly talent on senior- and early-career-level both from inside TUM and from around the globe, as well as researchers from the industry.

In addition, TUM-IAS offers a short-term Visiting Fellowship to its Alumni Fellows to continue or revive their collaboration with TUM, and encourages scientists who would like to explore the possibility of a long-term TUM-IAS Fellowship to consider a first, shorter visit via the TUM Global Visiting Professor Program.

Details about each type of Fellowship are given in the following.

#### Albrecht Struppler Clinician Scientist Fellowship



Aim and Target Group: The Albrecht Struppler Clinician Scientist Fellowship is designed for physicians working at the TUM School of Medicine, TUM University Hospital or German Heart Centre Munich who intend to further develop an independent research profile while at the same time continuing their clinical qualification. The Fellowship is aimed at outstanding, high-potential early-career scientists who have already or will shortly receive their certification as medical specialist (Facharzt/-ärztin) and who have already successfully

secured third-party funding. The Fellowship offers a relief of 50% from clinical duties, which gives Fellows time to carry out a transdisciplinary research project in collaboration with scientists from a department/school different to the TUM School of Medicine.

**Background:** The Fellowship is named after Albrecht Struppler (1919-2009), the first holder of a chair of neurology at TUM and a pioneer in building a bridge from the neurosciences to engineering. With this Fellowship, the TUM-IAS would like to encourage out-of-the-box ideas and cross-disciplinary exchange that may otherwise get lost in the busy everyday clinical routine, and reinforce health and medical sciences with perspectives and expertise from non-medical disciplines.

**Duration:** The Fellowship lasts three years during which the Fellow will continue their duties to a reduced extent (relief of 50%). The regulations of the applicant's home clinic at TUM regarding leave times have to be met by the Fellow.

**Connection to a TUM department/school other than the TUM School of Medicine:** Since it is the aim of this Fellowship to bridge medicine with other scientific fields represented at TUM, a cooperation partner/group from a TUM department/school other than the TUM School of Medicine must be identified in advance of the application. If applicable, this cooperation partner confirms to grant the Fellow use of facilities at their department/school (research, office, etc.).

**TUM-IAS Connection:** During the Fellowship, the Fellow is welcome to make use of the office space at the TUM-IAS building (long-term or short-term use possible). The Fellow should also actively contribute to interdisciplinary TUM-IAS events.

**Funding:** Since the Fellowship offers a relief of 50% from the Fellow's clinical duties, 50% of the Fellow's salary (TV Ärzte Ä2/Ä3) will be paid by TUM-IAS for the three years of the Fellowship (with the remaining part continuing to be paid by the Fellow's home clinic at TUM). The Fellowship also comprises  $15k \in$  per year for consumables, travel, workshop organization etc., and funding for a doctoral candidate (TV-L E13, 75%) for three years or a postdoctoral researcher (TV-L E13/E14 position, 100%) for two years. The Fellow's home clinic at TUM will cover 50% of the funding for the doctoral candidate or postdoctoral researcher.

Fellows will be given a maximum degree of freedom as to how they utilize these funds (within bounds set by funding agencies; funds will be administered by the TUM-IAS) and their time.

**Supervision of doctoral candidates:** The doctoral candidate will be co-advised by the Fellow and their senior mentors at the TUM School of Medicine and the co-hosting TUM department/school. Doctoral candidates should be pursuing a graduation as Dr. rer. nat,, Dr. med. (dent.) sci. or PhD. The doctoral work should be performed mainly during the Fellowship time; therefore, the search and hiring process of a candidate should be accomplished within three months after the Fellowship appointment.

# How to apply:

- Please submit the following application documents (as individual PDF files):
  - a cover page (available for download),
  - a CV (no more than 5 pages) including a list of secured third-party funding,
  - a list of major publications (please highlight the 3-5 most important publications of the past five years),
  - a statement of purpose (no more than 5-10 pages) jointly signed by the candidate and their collaborator(s) outside the TUM School of Medicine, describing how the Fellowship would contribute to the innovation of the scientific or technological environment at TUM, and the specific goals to be achieved. The statement of purpose should also include the following elements:
    - an abstract,
    - a budget and a time plan,
    - an identification of possible additional (interdisciplinary) collaboration partners both within TUM-IAS and within TUM as well as a short explanation as to why this collaboration would be beneficial for the outlined research project,
    - an outline for an international workshop/colloquium, to be organized at the TUM-IAS during the active Fellowship period,
  - a list of 4-6 international peer-reviewers without any conflict of interest (definition: please see <u>page 19</u>) – if applicable, also a list of persons who should be excluded from reviewing the proposal,
  - a letter of support (1-2 pages) by the chair/head physician of the applicant's home clinic at TUM,
  - a letter of support (1-2 pages) from the dean of the TUM School of Medicine,
  - a letter of support (1-2 pages) from the dean of the department/school of the cooperation partner/group.

**Calls:** Calls will be published once a year on the TUM-IAS website. Please submit applications according to the instructions published with the call.

**Evaluation:** Decisions will be made by the TUM-IAS director in mutual agreement with the dean of the TUM School of Medicine, supported by external reviews and advised by the TUM-IAS Advisory Council including a representative of the TUM School of Medicine. Decisions will be sent via email within six months.

#### Anna Boyksen Fellowship



**Target Group:** Outstanding top-level female professors from outside TUM who intend to explore gender- and/or diversity-relevant themes in the context of the TUM subject portfolio together with a TUM research group are eligible for a TUM-IAS Anna Boyksen Fellowship. The proposal is to be submitted jointly by the nominee and the planned TUM-IAS host.

**Background:** The Fellowship is named after Anna Boyksen, the first female engineering student at TUM (1906).

**Duration/Stays at TUM:** The Fellowships last two years, during which Fellows are expected to spend a total of three to six months at TUM. In this way, TUM-IAS intends to further a lasting and productive connection on an international level.

**Funding:** Anna Boyksen Fellows receive an award of max. €20,000 plus max. €50,000 for travel, accommodation and research-related costs (depending on the length of their stay). Fellows will be given a maximum degree of freedom as to how they utilize these funds (within bounds set by funding agencies; the funds are administered by the TUM-IAS) and their time. The award will be transferred to the Fellow typically in two or three installments.

**Anna Boyksen Visiting Fellowship:** For those scientists who cannot make the requirement of several months' stays at TUM, TUM-IAS offers Visiting Fellowships. TUM-IAS supports these short stays with travel and accommodation funding.

**Tandem nomination:** It is possible to nominate an Anna Boyksen Fellowship candidate as part of a "tandem package" together with a Hans Fischer (Senior) / Rudolf Diesel Industry Fellowship candidate. However, this is not mandatory – it is also possible to only nominate one candidate for an Anna Boyksen Fellowship.

For more information on tandem nominations, please see Hans Fischer (Senior) Fellowship (page 7 or page 9).

How to apply: Please submit the following documents:

- a cover page (available for download),
- a nomination letter (1-2 pages) from the dean of the hosting department/school or another member of the TUM Extended Board of Management (EHP) or TUM-IAS Board of Trustees,
- a nomination letter (1-2 pages) by a TUM professor including the facilities provided for the Fellow by the TUM host institute,
- a CV (no more than 5 pages),
- a list of major publications (please highlight the 3-5 most important publications of the past five years),
- a statement of purpose (no more than 5-10 pages) jointly signed by the nominee and the hosting professor, describing how the Fellowship would contribute to the innovation of the scientific environment at TUM, the specific goals to be achieved, a budget plan and a time plan regarding the nominee's projected periods of stay at TUM. The statement should clearly indicate to what extent the research project covers gender- and/or diversity-related themes. Moreover it should be prefaced with an abstract.

a list of 4-6 international peer-reviewers without any conflict of interest (definition: please see page 19) – if applicable, also a list of persons who should be excluded from reviewing the proposal

Calls will be published once a year on the TUM-IAS website. Please submit nominations online.

Decisions on the award will be made in consultation with the TUM Senior Vice President Talent Management and Diversity and the TUM Gender & Diversity Board.

# Carl von Linde Fellowship



**Target Group:** The Carl von Linde Fellowship is aimed at TUM professors who have made excellent, internationally recognized achievements in research and who wish to pursue research work of particular originality and a high degree of innovation ("high risk - high gain"), preferably in an interdisciplinary team with other TUM-IAS Fellows.

**Background:** The Fellowship is named after TUM professor Carl von Linde (1842-1934), who invented the air liquefaction and founded the "Linde's Eismaschinen" company in 1879.

**Aim:** Carl von Linde Fellows are expected to provide substantial scientific leadership towards the creation of new research areas at TUM, and to contribute substantially to the intellectual life of the TUM-IAS and the university.

The TUM-IAS awards up to two Carl von Linde Fellowships each year.

**Duration:** The Carl von Linde Fellowship lasts two years, along with the opportunity to fully devote time to the development of the new research area.

**Funding:** Support for Carl von Linde Fellows consists of €250,000 with a duration of two years. The Carl von Linde Fellows can be released from teaching duties if desired, in which case a substitute professorship can be financed from the funding to provide teaching.

**How to apply:** The President of TUM and the TUM-IAS director agree on suitable candidates for the Carl von Linde Fellowships, taking into account university-strategic considerations. Following a decision by the TUM Management Board, candidates are presented to the TUM-IAS Board of Trustees for evaluation. After the Board's approval, the Carl von Linde Fellows are appointed by the President of TUM and the TUM-IAS director.

#### Hans Fischer Senior Fellowship



**Target Group:** Outstanding international scientists who intend to explore innovative, high-risk topics in their scientific research areas together with a TUM Research Group are eligible for a TUM-IAS Hans Fischer Senior Fellowship. The nominee and the planned TUM-IAS host should submit a joint proposal.

**Background:** This Fellowship is named after TUM professor Hans Fischer (1881-1945), who was awarded the Nobel Prize in Chemistry in 1930 for his pioneering work on hemoglobin and related structures.

**Duration/Stays at TUM:** The Fellowships last three years with the expectation that the Fellow will spend a total of at least nine months at TUM (which can be divided individually into several stays). In this way, TUM-IAS intends to further a lasting and productive connection on an international level.

Hans Fischer Senior Fellows will automatically receive the benefits of a TUM-IAS Visiting Fellow for the year following the end of their tenure. Support includes up to  $\leq 10,000$  for non-European or up to  $\leq 5,000$  for European travel to TUM and accommodation expenses. Afterwards Alumni Fellows may apply for a Visiting Fellowship, depending on the availability of funds.

**Funding:** Hans Fischer Senior Fellows receive an award of €60,000 plus €50,000 for travel, accommodation and research-related costs, such as the organization of workshops etc. A further €50,000 can be allocated to the Fellowship if required (e.g. projects with special experimental needs). This further funding requires an application to the TUM-IAS office and will be granted on the basis of quality, need and availability of funds. Fellows will be given a maximum degree of freedom as to how they utilize these funds (within bounds set by the funding agencies; funds are administered by the TUM-IAS) and their time. The award will be transferred to the Fellow typically in two to three installments.

**Doctoral candidate:** Hans Fischer Senior Fellows receive support for one doctoral candidate at TUM (TV-L E13 position (max. 75%) for three years), who will be co-advised by the TUM host professor and the Hans Fischer Senior Fellow. Hans Fischer Senior Fellows have the right to award doctorates (Promotionsrecht). The doctoral candidate is encouraged to spend a significant part of their studies abroad at the home institute of the TUM-IAS Fellow. The doctoral work should be performed mainly during the Fellowship time, therefore the search and hiring process of a candidate should be accomplished within six months after the Fellowship appointment. In exceptional cases TUM-IAS may also consider a limited post-doc position, within the same financial framework.

**Tandem nomination:** Nominations for Hans Fischer and Hans Fischer Senior Fellowships (including the Siemens and GNI Fellowships, not including the Regional Fellowships) require a tandem nomination, i.e. each prospective host must nominate two potential Fellows, at least one of whom must be a female scientist. Both nominations will be evaluated individually according to our usual multi-stage evaluation procedure (please see <u>page 18</u> for further details). Tandem nominations can be for the same or for several <u>Fellowship categories</u> (options: Hans Fischer Senior plus Hans Fischer (Senior), Hans Fischer Senior plus Anna Boyksen, or Hans Fischer Senior plus Rudolf Diesel Industry Fellowship). From the proposed tandem, both nominees may be successful, or one, or none.

# How to apply:

- The deans of TUM departments/schools, all further members of the TUM Extended Board of Management (EHP) and members of the TUM-IAS Board of Trustees can directly nominate candidates for TUM-IAS Fellowships (any member of the university community can propose, but the nomination must be channeled through the dean of the hosting department/school or the director of the hosting institute).
- Please submit the following application documents:
  - a cover page (available for download),
  - a nomination letter (1-2 pages) by the host at TUM, including the facilities provided by the hosting institute,
  - a CV (no more than 5 pages),
  - a list of major publications (please highlight the 3-5 most important publications of the past five years),
  - a statement of purpose (no more than 5-10 pages) jointly signed by the nominee and the hosting professor, describing how the Fellowship would contribute to the innovation of the scientific or technological environment at TUM, and the specific goals to be achieved. The statement of purpose should also include the following elements:
    - an abstract,
    - a budget plan,
    - a time plan regarding the nominee's projected periods of stay at TUM,
    - an identification of possible additional (interdisciplinary) collaboration partners both within TUM-IAS and within TUM as well as a short explanation as to why this collaboration would be beneficial for the outlined research project,
    - an outline for an international, ideally interdisciplinary workshop/colloquium, to be organized at the TUM-IAS during the active Fellowship period,
  - a list of 4-6 international peer-reviewers without any conflict of interest (definition: please see <u>page 19</u>) – if applicable, also a list of persons who should be excluded from reviewing the proposal,
  - a nomination letter (1-2 pages) from the dean of the hosting department/school or another member of the EHP or Board of Trustees
- Calls will be published once a year on the TUM-IAS website. Please submit nominations online. Decisions will be sent via email within six months.

#### Hans Fischer Fellowship



**Target Group:** Outstanding early-career (doctorate completed within the past 12 years) international scientists who intend to explore innovative, high-risk topics in their scientific research areas together with a TUM Research Group are eligible for a TUM-IAS Hans Fischer Fellowship. The nominee and planned TUM-IAS host should submit a joint proposal.

**Background:** This Fellowship is named after TUM professor Hans Fischer (1881-1945), who was awarded the Nobel Prize in Chemistry in 1930 for his pioneering work on hemoglobin and related structures.

**Duration/Stays at TUM:** The Fellowships last three years with the expectation that the Fellow will spend a total of at least nine months at TUM (which can be divided individually into several stays). In this way, the TUM-IAS intends to further a lasting and productive connection on an international level.

Hans Fischer Fellows will automatically receive the benefits of a TUM-IAS Visiting Fellow for the year following the end of their tenure. Support includes up to €10,000 for non-European or up to €5,000 for European travel to TUM and accommodation expenses. Afterwards Alumni Fellows may apply for a Visiting Fellowship, depending on the availability of funds.

**Funding:** Hans Fischer Fellows receive an award of €30,000 plus €50,000 for travel, accommodation and research related costs, such as the organization of workshops etc. A further €30,000 can be allocated to the Fellowship if required (e.g. for projects with special experimental needs). This further funding requires an application to the TUM-IAS office and will be granted on the basis of quality, need and availability of funds. Fellows will be given a maximum degree of freedom as to how they utilize these funds (within bounds set by funding agencies; the funds are administered by the TUM-IAS) and their time. The award will be transferred to the Fellow typically in two to three installments.

**Doctoral candidate:** Hans Fischer Fellows receive support for one doctoral candidate at TUM (TV-L E13 position (max. 75%) for three years), who will be co-advised by the TUM host professor and the Hans Fischer Fellow. Hans Fischer Fellows have the right to award doctorates (Promotionsrecht). The doctoral candidate is encouraged to spend a significant part of their studies abroad at the home institute of the TUM-IAS Fellow. The doctoral work should be performed mainly during the Fellowship time, therefore the search and hiring process of a candidate should be accomplished within six months after the Fellowship appointment. In exceptional cases TUM-IAS may also consider a limited post-doc position, within the same financial framework.

**Tandem nomination:** Nominations for Hans Fischer and Hans Fischer Senior Fellowships (including the Siemens and GNI Fellowships, not including the Regional Fellowships) require a tandem nomination, i.e. each prospective host must nominate two potential Fellows, at least one of whom must be a female scientist. Both nominations will be evaluated individually according to our usual multi-stage evaluation procedure (please see <u>page 18</u> for further details). Tandem nominations can be for the same or for several <u>Fellowship categories</u> (options: Hans Fischer plus Hans Fischer (Senior), Hans Fischer plus Anna Boyksen, or Hans Fischer plus Rudolf Diesel Industry Fellowship). From the proposed tandem, both nominees may be successful, or one, or none.

# How to apply:

- The deans of TUM departments/schools, all further members of the TUM Extended Board of Management (EHP) and members of the TUM-IAS Board of Trustees can directly nominate candidates for TUM-IAS Fellowships (any member of the university community can propose, but the nomination must be channeled through the dean of the hosting department/school or the director of the hosting institute).
- Please submit the following application documents:
  - a cover page (available for download),
  - a nomination letter (1-2 pages) by the host at TUM, including the facilities provided by the hosting institute,
  - a CV (no more than 5 pages),
  - a list of major publications (please highlight the 3-5 most important publications of the past five years),
  - a statement of purpose (no more than 5-10 pages) jointly signed by the nominee and the hosting professor, describing how the Fellowship would contribute to the innovation of the scientific or technological environment at TUM, and the specific goals to be achieved. The statement of purpose should also include the following elements:
    - an abstract,
    - a budget plan,
    - a time plan regarding the nominee's projected periods of stay at TUM,
    - an identification of possible additional (interdisciplinary) collaboration partners both within TUM-IAS and within TUM as well as a short explanation as to why this collaboration would be beneficial for the outlined research project,
    - an outline for an international, ideally interdisciplinary workshop/colloquium, to be organized at the TUM-IAS during the active Fellowship period,
  - a list of 4-6 international peer-reviewers without any conflict of interest (definition: please see <u>page 19</u>) – if applicable, also a list of persons who should be excluded from reviewing the proposal,
  - a nomination letter (1-2 pages) from the dean of the hosting department/school or another member of the EHP or Board of Trustees
- Proposed Fellows have to have completed their doctorate within the last 12 years (allowance can be made for special circumstances like parental leave). Hans Fischer Fellows have to provide a proof of employment at their home institution for the duration of the Fellowship.
- Calls will be published once a year on the TUM-IAS website. Please submit nominations online. Decisions will be sent via email within six months.

# **Rudolf Diesel Industry Fellowship**



**Target Group:** The TUM-IAS Rudolf Diesel Industry Fellowship is designed for outstanding researchers from industry who would like to expand their connection to a TUM research group.

**Aim:** It is the Fellowship's purpose to enhance collaboration and knowledge-sharing between research units at TUM and company research laboratories. To increase international collaboration, TUM-IAS especially welcomes applications from companies from outside Germany.

**Background:** The Fellowship is named after Rudolf Diesel (1858-1913), who was a TUM student with Prof. Carl von Linde. In 1897, Diesel invented the combustion principle that is named after him.

**Duration/Nature of the Fellowship:** The Fellowship lasts three years, during which the Fellow continues to be employed by his company. It is based on a joint proposal by the nominee and the TUM host professor. Throughout the affiliation period, the Rudolf Diesel Industry Fellows may offer special courses and lectures in their field of expertise to enhance the connection between university and industry. Fellows are expected to develop an intensive collaboration with their hosting Focus Group, to participate in TUM-IAS programs and events, and to organize activities such as a workshop, public talks, or speakers' series in order to contribute to the intellectual life of the IAS and the university.

**Funding:** The Fellow receives a research fund (up to €20.000) for travel, accommodation and research related costs (e.g. organizing a workshop) depending on the length of their actual stay at TUM. Fellows will be given a maximum degree of freedom as to how they utilize these funds (within bounds set by funding agencies; the funds are administered by the TUM-IAS).

**Doctoral candidate:** Rudolf Diesel Industry Fellows receive financial support for one doctoral candidate at TUM (TV-L E13 position (max. 75%) for three years), who will be co-advised by the TUM host professor and the Rudolf Diesel Industry Fellow. The doctoral work should be performed mainly during the Fellowship time, therefore the search and hiring process of a candidate should be accomplished within six months after the Fellowship appointment. In exceptional cases, TUM-IAS may also consider a limited post-doc position, within the same financial framework.

**Tandem nomination:** It is possible to nominate a Rudolf Diesel Industry Fellowship candidate as part of a "tandem package" together with a Hans Fischer (Senior) Fellowship candidate. However, this is not mandatory – it is also possible to only nominate a candidate for a Rudolf Diesel Industry Fellowship. For more information on tandem nominations, please see Hans Fischer (Senior) Fellowship (page 7 or page 9).

#### How to apply:

- The deans of TUM departments/schools, all further members of the TUM Extended Board of Management (EHP) and members of the TUM-IAS Board of Trustees can directly nominate candidates for TUM-IAS Fellowships (any member of the university community can propose, but the nomination must be channeled through the dean of the hosting department/school or the director of the hosting institute).
- Please submit the following application documents:
  - a cover page (available for download),
  - a nomination letter (1-2 pages) by the host at TUM, including the facilities provided by the hosting institute,

- a CV (no more than 5 pages),
- a list of major publications (please highlight your 3-5 most important publications of the past five years),
- a statement of purpose (no more than 5-10 pages) jointly signed by the nominee and the hosting professor, describing the content of the joint research, its innovative potential and the concrete implementation plans. This statement should also include
  - an abstract,
  - a budget plan,
  - a time plan regarding the nominee's projected periods of stay at TUM,
  - an identification of possible additional (interdisciplinary) collaboration partners both within TUM-IAS and within TUM as well as a short explanation as to why this collaboration would be beneficial for the research project outlined,
  - an outline for an international, ideally interdisciplinary workshop/colloquium, to be organized at the TUM-IAS during the active Fellowship period,
- a list of 4-6 international peer-reviewers without any conflict of interest (definition: please see <u>page 19</u>) – if applicable, also a list of persons who should be excluded from reviewing the proposal,
- a nomination letter (1-2 pages) from the dean of the hosting department/school or another member of the EHP or Board of Trustees.
- The TUM-IAS may ask its Rudolf Diesel Industry Fellows to provide a proof of employment with their company for the duration of their Fellowship.
- Calls will be published once a year on the TUM-IAS website. Please submit nominations online. Decisions will be sent via email within six months.

### Rudolf Mößbauer Tenure Track Professorship



**Target Group:** Within the comprehensive TUM Faculty Tenure Track system, TUM-IAS created a special Fellowship offering meritbased academic career options from the appointment as *Assistant Professor* through a permanent position as *Associate Professor* and on to *Full Professor*. Rudolf Mößbauer Tenure Track Professorships are intended for outstanding, high-potential early-career scientists who have already achieved a major scientific or technological

breakthrough and who have the ambition of developing a new field of endeavor when joining TUM (as a Tenure Track Assistant Professor).

**Background:** This Fellowship is named after TUM professor Rudolf Mößbauer (1929-2011), who was awarded the Nobel Prize in Physics in 1961 for his research concerning the resonance absorption of gamma radiation and his discovery in this connection of the effect that bears his name.

**Aim:** TUM-IAS Fellows are expected to develop independent and vigorous programs, including the acquisition of research funds and the societal positioning of their fields. Besides the development of their research, Fellows are expected to participate in TUM-IAS programs and organize activities in order to contribute to the intellectual life of the IAS and the university. Furthermore, candidates should be committed to excellence in undergraduate/graduate teaching and in supervising doctoral candidates, although the emphasis of the professorship lies in the creative development of the proposed new field of science and/or technology.

**Funding:** The Rudolf Mößbauer Tenure Track Professorship consists of a salary according to the W pay scale (initially grade W2) for up to six years, the funding of a research assistant (TV-L E13), and an expense account for research support. TUM-IAS Fellows will be given a maximum degree of freedom as to how they utilize these funds (within bounds set by funding agencies; the funds are administered by TUM-IAS) and their time.

**Tenure Track career path:** After positive evaluation in the sixth year, the Rudolf Mößbauer Tenure Track Fellow is tenured on an Associate Professor level. Tenure evaluation may be initiated after a minimum of three years only in exceptional cases, justified by extraordinarily outstanding achievements or in regard of particularly strategic significance in shaping the university's profile.

#### Eligibility criteria:

- Doctorate or comparable academic degree (PhD or equivalent), completed with distinction in an area of research appropriate to the TUM research portfolio,
- Two years of postdoctoral experience during which the applicant has achieved scientific independence,
- Strong scientific track record documented by a comprehensive list of academic publications for internationally reviewed journals and/or publishing houses, depending on the practices of the field of expertise,
- International research experience,
- Teaching skills at university level and additional academic achievements (according to Art. 7 and Art. 10 BayHSchPG),
- Excellent knowledge of the English language.

How to apply: Please send in the following documents

- a statement of purpose describing the research and teaching goals and strategies of the planned professorship, including how the proposed program would be instrumental in (strongly) innovating the research environment at TUM (please include an abstract of about half a page),
- a CV (including third-party funding and list of courses taught),
- a list of publications including three selected reprints,
- names and addresses of at least three references.

For the complete list of documents required please see the individual calls which will be published on the TUM-IAS website. Applications are to be submitted online. TUM-IAS follows the TUM Faculty Tenure Track Entry Evaluation procedure (for detailed information please see <u>here</u>) to evaluate the quality of the proposals. Decisions will be sent via email within six months.

# **TUM-IAS Philosopher in Residence**

**Target Group:** The Philosopher in Residence Fellowship is aimed at internationally leading and emerging representatives of the field of philosophy wishing to carry out a joint project with a TUM professor (or several TUM professors, if cooperation in a group is suitable) from the fields of natural sciences, engineering, life sciences including medicine and health sciences, economics or social sciences. Applicants are completely free in their choice of topics.

**Objective:** The Fellowship is scheduled for 12 months – four of those will be spent at TUM. We promote philosophical engagement with the latest research and innovative approaches in the above areas.

**Funding:** The TUM-IAS Philosopher in Residence is endowed with €30,000 for research-related costs, travel expenses and accommodation. In addition, the TUM-IAS Philosopher in Residence receives an award of €70,000. The publication of the results and the organization of a workshop at TUM-IAS are expected.

**Conditions:** The program is designed for internationally renowned scholars with doctoral degrees and advanced experience in philosophy whose interests lie across disciplines, i. e. natural sciences, engineering, life sciences including medicine and health sciences, economics or social sciences.

How to apply: The applicant submits the following documents:

- cover page (available for download)
- CV (no more than 5 pages),
- list of publications (please highlight the 3-5 most important publications of the past five years),
- supporting letter (1-2 pages) by a TUM professor (host),
- supporting letter by the dean of the TUM professor's School,
- statement of purpose (no more than 5-10 pages) jointly signed by the applicant and the hosting professor, describing how the Fellowship would contribute to scientific innovation, and the specific issues to be investigated (including their social relevance, if applicable). The statement of purpose should also include the following elements:
  - an abstract,
  - a budget plan,
  - a time plan regarding the applicant's projected period(s) of stay at TUM,
  - an outline for an international, interdisciplinary workshop/colloquium, to be organized at the TUM-IAS during the Fellowship period,
- list of 4-6 international peer-reviewers without any conflict of interest; if applicable, also a list of
  persons that should be excluded from reviewing the proposal

Calls will be published once a year on the TUM-IAS website. Please submit applications online.

# Visiting Fellowship for Alumni Fellows

**Aim:** TUM-IAS awards the "Visiting Fellowship for Alumni Fellows" to Alumni Fellows who would like to continue or revive their collaboration with a TUM host and/or group. The Visiting Fellowship for Alumni is available for a period of up to three months. All Alumni Fellows from institutions other than TUM are welcome to apply.

**Funding:** The Visiting Fellowship for Alumni Fellows contains funding for travel and local accommodation. The overall amount will be appointed individually by TUM-IAS and depends on various factors e.g. the length of the period of stay. The funding can only be used for the Alumnus/a Fellow. (If you have family obligations and cannot travel by yourself, please discuss this with the TUM-IAS management.) Costs will be reimbursed on the basis of tickets, invoices etc.; it is not possible to transfer the funding to the Alumnus/a Fellow's account.

**How to apply:** TUM-IAS awards the Visiting Fellowship for Alumni Fellows on the basis of a nomination by a TUM professor (usually the former host).

- Nominations can be made at any time of the year.
- A nomination must include the current CV of the nominee (including a list of the most important 3-5 publications) and a statement of purpose (~2 pages) jointly written by the Alumnus/a Fellow and the nominator. The statement of purpose describes the scientific collaboration planned for the visit, including any planned talks or other scientific events. It should also provide information on the proposed length and period of stay, a budget plan, and practical arrangements for hosting the nominee (TUM-IAS can provide assistance and accommodation as well as office facilities).
- Alumni Fellows can apply for one Visiting Fellowship per year.

The director of TUM-IAS will decide on the award after consultation with the staff of TUM-IAS, taking budgetary considerations into account.

For other scientists interested in visiting TUM and/or the TUM-IAS for a short period of time, please see the <u>TUM Global Visiting Professor Program</u>.

### **General Information about Fellowships**

- In order to enhance successful nominations, a preliminary discussion with the TUM-IAS office is highly recommended.
- Carl von Linde Fellowships are awarded by the TUM-President and the TUM-IAS director based on consultation with the TUM Management Board and the TUM-IAS Board of Trustees. An independent peer-review process is used to select the Albrecht Struppler, Anna Boyksen, Hans Fischer (Senior), Rudolf Diesel Industry Fellows and the Philosophers in Residence. TUM-IAS follows the TUM Faculty Tenure Track Entry Evaluation procedure (for detailed information please see here) to evaluate the quality of the proposals for Rudolf Mößbauer Tenure Track Professorships. Visiting Fellowships for Alumni Fellows are decided on a case by case basis by the TUM-IAS director.
- All Fellows are "embedded" in the department/school to which their host belongs, and receive all the benefits, accommodation and honors the respective department/school provides to its guest scientists.
- Rudolf Diesel Industry Fellows: TUM-IAS has an IPR agreement/concept that covers mutual IPR rights and duties in the cooperation between TUM and the company or university of the Fellow, via the research unit they are participating in. The agreement is in accordance with the purposes of the Fellowship. These purposes aim at the expansion of the mutual scientific and technological knowledge base for the benefit of both parties and the enhancement of the cooperation between research groups at TUM and other universities or companies. The IPR agreements are typically dealt with on a case-by-case basis. For TUM employees different rules apply as stated in the respective TUM employment arrangements.
- For Fellowships which comprise funding for a doctoral candidate, TUM-IAS funds doctoral candidates by paying a TV-L E13 position (max. 75%) for three years.
- Doctoral candidates and postdoctoral researchers are part of the TUM-IAS community. In case of changes in personnel, the TUM-IAS office must be informed immediately and the further procedure will then be discussed.
- Fellows will be allocated an office space in the TUM-IAS building in Garching depending on need and availability. Postdoctoral researchers and doctoral candidates connected to Fellows may also be accommodated.
- TUM-IAS will provide assistance to all non-Munich based Fellows in search for accommodation for themselves or their families.
- Travel expenses of Anna Boyksen, Hans Fischer (Senior) and Rudolf Diesel Industry Fellows to Munich will be covered by their research fund. To present the research of the Focus Group, travel costs to conferences can also be covered by their research fund. The TUM-IAS office requires further documentation on these expenses (conference program/paper/poster/ presentation; invitation letter for a lecture).

# **Evaluation Process**

TUM-IAS follows a strict multi-stage evaluation procedure to ensure the high quality of its Fellowships. The evaluation committee involved is the TUM-IAS Advisory Council. It consists of 13-14 TUM professors, representing the various disciplines of TUM.



- Stage 1 All applications undergo a first eligibility check by the TUM-IAS management with regard to the formal criteria of the respective Fellowship types. All eligible proposals are then made available to the Advisory Council.
- Stage 2The Advisory Council comes together to review and discuss all proposals and advises<br/>the TUM-IAS director which proposals to put on a shortlist.
- Stage 3 All shortlisted proposals are peer-reviewed by international independent experts (for more information, see <u>page 19</u>) in the candidates' respective fields of research. A number of experts have been suggested by the candidate, others have been selected by TUM-IAS. All peer reviewers receive a detailed questionnaire with which to structure their review in order to ensure a maximum of comparability despite the multidisciplinary nature of the proposals.
- Stage 4The anonymized peer reviews are sent to the candidates for commenting ("rebuttal")to ensure a maximum of transparency for the candidates and their hosts.
- Stage 5 The Advisory Council comes together for a second time to review the shortlisted applications as well as the reviews and their rebuttals. On this basis, the Advisory Council recommends to the TUM-IAS director which Fellows to appoint (taking budgetary considerations into account).

# **Conflicts of Interest**

All shortlisted applications/nominations are evaluated by independent reviewers. In order to ensure that there is no actual or potential conflict of interest, we must ask any reviewers to refrain from evaluating the proposal if the following circumstances apply:

- 1. First-degree relationships, marriage, life partnership, domestic partnership with the applicant/nominee and/or host.
- 2. Personal (financial) interest in the proposal's success or (financial) interest by persons listed under no. 1.
- 3. Current (within the past three years) or planned close scientific cooperation with the applicant and/or host.
- 4. Dependent supervisory relationship (e.g. teacher-student relationship up to and including the postdoctoral phase) with the applicant and/or host, extending six years beyond the conclusion of the relationship.
- 5. The affiliation or pending transfer to the department or to the non-university research institute of the applicant/nominee or host.
- 6. Any other situation that would compromise the ability to unbiasedly evaluate the proposal.

# **Responsibilities of Fellows**

TUM-IAS fosters an active community of scientists based on dialogue and communication and therefore expects a few direct contributions from its Fellows and hosts, in particular

- The Fellows are expected to spend a certain time of their Fellowship (as stated in the letter of appointment) at TUM, preferably in one of the TUM-IAS offices.
- For administrative purposes, we expect the Fellow to announce every stay in Munich to the responsible program manager at least two weeks in advance. Failure to do so may result in the declaration of expenses related to this stay as non-eligible.
- The mission of TUM-IAS is to develop new, excellent research areas at TUM and to promote the building up of a functioning interdisciplinary community generating new ideas and researcher networks. Therefore, during their stays at TUM Fellows are expected to really use the premises provided by TUM-IAS and participate in common activities including Wednesday Coffee Talks, Fellows' Lunches, the General Assembly and TUM-IAS lectures. These events have a core importance in the Mission of the IAS and repeated absences are strongly discouraged.
- The Fellows should actively participate in TUM-IAS programs and events, and organization of activities such as an inaugural lecture, a workshop, public talk, or speakers' series in order to contribute to the intellectual life of the IAS and TUM.
- The Fellows are obliged to state the TUM-IAS address in scientific publications related to their Fellowship, which, among other reasons, is essential for the correct evaluation of the TUM-IAS scientific output. The correct address designation is: Institute for Advanced Study, Technical University of Munich, Lichtenbergstrasse 2 a, D-85748 Garching, Germany.
- Any publications made in the context of a TUM-IAS Fellowship must include a statement acknowledging the (partial) support from TUM-IAS (as well as other funding agencies or sponsors, if applicable) in publications, including articles, books, etc. The <u>TUM Publications</u> <u>Guidelines</u> apply. Since the TUM-IAS Fellows receive funding from various sources, please refer to your Fellowship agreement for the exact wording for your acknowledgement.
- Acknowledgment of the support from the TUM-IAS (and the TUM-IAS funding agencies and sponsors, if applicable) should include the affiliation on the Fellows' homepages and inclusion of the TUM-IAS (and funding agencies' and sponsors') logos on publications, posters, presentations, etc. Logos are made available to the Fellow upon their appointment.
- Any patent applications filed by or on behalf of the Fellow in the context of a TUM-IAS Fellowship must include a statement acknowledging the (partial) support from TUM-IAS (as well as other funding agencies or sponsors, if applicable). Since the TUM-IAS Fellows receive funding from various sources, please refer to your Fellowship agreement for the exact wording for your acknowledgement.
- TUM-IAS generates an annual report on the research activities of the IAS. Fellows must provide text and graphic material on their research activities to be included in these publications.
- Fellows are asked to provide data for the TUM-IAS webpage including research interests, publications, and upcoming events and workshops for their Focus Group.
- Key performance data of the Fellowship, i.e. publications, patents, conference presentations, major projects and collaborations started etc. have to be provided after the three years tenure, in form of a final written report on the Fellowship results.

# Responsibilities of Doctoral Candidates and Postdoctoral Researchers funded by TUM-IAS

- Doctoral candidates and postdoctoral researchers funded via a TUM-IAS Fellowship are members of the TUM-IAS community and are expected to make active use of the opportunities provided by the TUM-IAS e.g. the interdisciplinary exchange with other researchers during the weekly Wednesday Coffee Talks (during the three-year financing over the IAS doctoral candidates are expected to attend ca. 30 of these events).
- When planning a longer stay abroad at the Fellow's home institution, doctoral candidates and
  postdoctoral researchers are strongly encouraged to get in touch with the responsible program
  manager at their earliest convenience to discuss what can and cannot be financed via the
  Fellowship funds. Please note that the Bavarian Travel Expense Law (Bayerisches
  Reisekostengesetz) applies.
- Doctoral candidates and postdoctoral researchers are obliged to state the TUM-IAS address in scientific publications related to their Fellowship, which, among other reasons, is essential for the correct evaluation of the TUM-IAS scientific output. The correct address designation is: Institute for Advanced Study, Technical University of Munich, Lichtenbergstrasse 2 a, D-85748 Garching, Germany.
- Doctoral candidates and postdoctoral researchers are expected to acknowledge the TUM-IAS support in all publications and presentations as well as, if applicable, in the doctoral thesis.
- Since the TUM-IAS Fellows receive funding from various sources, please refer to the TUM-IAS Fellowship agreement for the exact wording for your acknowledgement.
- A link to the doctoral thesis on mediaTUM will be published on the IAS website. Please get in touch with the TUM-IAS office after the successful disputation of your thesis.
- Acknowledgment of the TUM-IAS affiliation and inclusion of the TUM-IAS logo (and logos of other funding agencies or sponsors, if applicable) on publications, posters, presentations, etc.
   Failure to do may cause a rejection of the respective travel cost reimbursement request.

TUM-IAS operations and funding decisions are primarily based on TUM's financial regulations. On the TUM-IAS webpage you can find a FAQ list (including general financial and administrative questions) which is intended to be a helpful guideline for the preparation of reimbursement requests.

### Start-up Support

The TUM-IAS Start-up fund is dedicated to fostering the exploration of new scientific or technological topics. Eligible for this program are first and foremost, members of the TUM-IAS community who want to explore new areas with the possibility of generating new collaborations/research grants in the future, mainly via the organization of exploratory workshops. These funds cannot be used for supporting regular seminars or conferences or already ongoing collaborations. Exploratory workshops are mostly by invitation and aim at engaging an international community of researchers to spend a few days in Munich in both formal and informal presentations and discussions on new ideas and developments. This special fund is limited, and potential organizers will typically have to arrange for additional funding through other means. The contribution to such an event will be in the range of € 4,000, to be negotiated with the TUM-IAS management team. TUM-IAS will also provide some services towards the organization of the event and the use of the TUM-IAS building and facilities. The TUM-IAS management team shall be happy to provide prospective organizers with further information. For Fellows in their active Fellowship period, such activities will be covered primarily by the research funds available through their Fellowship. To apply for Start-up support, TUM-IAS members hand in a short proposal describing the project, the overall budget, and the funds required via Start-up support.

# **Research Areas and Focus Groups**

The innovative research TUM-IAS Fellows engage in does not usually happen in a vacuous environment. Fellows and their hosts are part of research units at TUM. They either provide leadership to institutes, research units or laboratories or are prominent guests at those. TUM-IAS deems such an institutional embedding necessary and gives it the status of a Focus Group. Focus Groups form the local, topical and organizational units of the TUM-IAS. They provide the social environment where Fellows, hosts, their doctoral candidates, and collaborators meet to share the development of their topic, organize activities, and cater for mutual support. Ideally, these teams are also diverse in terms of disciplines and gender.

TUM-IAS is Fellow-driven, not thematically driven. However, big themes emerge dynamically and are further developed over time. The <u>Research Areas</u> embedded into TUM-IAS therefore cover a wide range of innovative, interdisciplinary fields. While the Fellowships can only last for a limited period of time, it is their purpose to establish sustainable, long-term research collaborations that are embedded in the TUM departments/schools.

- External Fellows are associated with hosts. These are professors at TUM who have been successful in proposing and obtaining a Fellow, have agreed to host them and are jointly developing the proposed research. TUM-IAS honors not only the Fellow, but the proposer as well and recognizes their contribution by inviting them to be a member of the TUM-IAS. New Fellows and hosts can join an existing Focus Group or create a new one, depending on topic and necessity. TUM-IAS appreciates intense interaction between Fellows, hosts and their further collaborators and doctoral candidates, but leaves the choice of the precise set up to them.
- Focus Groups are headed by either a Carl von Linde Fellow or one of the host professors. They are created by mutual agreement between the participating Fellows, their hosts and the TUM-IAS.
- Focus Groups have a coordinator who documents the activities of the group and keeps the TUM-IAS office informed about the groups' activities (workshops, special lectures, events, or other programs).
- Focus Groups can apply for funding of exploratory workshops, and for any kind of additional Fellowship furthering their goals (Fellow nominations have to meet the requirements of the individual Fellowship categories, but natural embedding of new Fellows and their hosts in established Focus Groups is seen positively).
- Focus Groups are expected to document their field and their goals and to present their Fellows on the webpage of the TUM-IAS.
- Focus Groups exist as long as active long-term Fellows are participating in them (formally up to a maximum of one year after the tenures of the last Fellows have terminated). TUM-IAS encourages its Focus Groups to assure their sustainability by actively pursuing new Fellowship proposals.

#### **TUM-IAS Community Members**

#### Alexander von Humboldt Awardees

A memorandum of understanding between the Alexander von Humboldt Foundation and TUM-IAS was signed on May 7, 2009 to promote the integration of Humboldt Awardees into TUM-IAS. The TUM-IAS welcomes the Humboldt Professors as Honorary Fellows and members of the TUM-IAS community. Humboldt Research Awardees are appointed Honorary Hans Fischer Senior Fellows and members of the TUM-IAS community. They provide for very much appreciated new ideas and strengthening of the scientific work at TUM. At TUM-IAS they find a natural environment where they can smoothly merge into the scientific proceedings of our university.

#### **Amalie Baur Fellows**

The Amalie Baur Fellowship was established at TUM in 2016 to attract and promote excellent early career scientists from social and cultural sciences, which otherwise would have no access to the TUM or the TUM-IAS. The Fellowship was named after Amalie Baur, the first woman who completed her doctorate at TUM (Dr. Ing., 1918). The Fellowship was intended for outstanding early career scientists, who had completed their doctorate within the past 12 years. The funding was provided either by the TUM Board of Management or by one of the TUM departments.

The Amalie Baur Fellowship is currently suspended.

#### **ERC Grant Awardees**

ERC (starting, consolidator, advanced, and proof of concept) grantees become Honorary Fellows and members of the TUM-IAS community in recognition of their high quality of work and success on this highly competitive program of the EU.

### **Gottfried Wilhelm Leibniz Prize Winners**

The TUM-IAS welcomes the Gottfried Wilhelm Leibniz Prizewinners as Honorary Fellows and members of the TUM-IAS community. This prize is the highest honor awarded in German research and aims to improve the working conditions of outstanding scientists and academics, expand their research opportunities, relieve them of administrative tasks, and help them employ particularly qualified early-career researchers, very much in accordance with the TUM-IAS philosophy.

#### **TUM Distinguished Affiliated Professors**

TUM Distinguished Affiliated Professors are major international figures in research who have decisively advanced and put their stamp on their disciplines. Therefore, they are considered as Honorary Fellows and members of the TUM-IAS community.

#### **TUM Liesel Beckmann Distinguished Professors**

Liesel Beckmann Distinguished Professorships take their name from the first woman professor at Technische Hochschule München, as the university was known in her time. The honorary title is bestowed on full professors at TUM who have significantly advanced their scientific field. This distinction is combined with an Honorary Fellowship and membership at TUM-IAS.

# **Discontinued Membership Programs**

# **TUM August-Wilhelm Scheer Visiting Professors**

August-Wilhelm Scheer Visiting Professorships were awarded by the TUM Global and Alumni Office to scientists with an outstanding international reputation who wished to engage in an intensive collaboration with TUM researchers for one to two semesters. The program was replaced by the TUM Global Visiting Professor Program in 2019.

# **TÜV Süd Stiftung Visiting Professors**

TÜV Süd Stiftung Visiting Professorships were awarded to short-term visiting scientists collaborating with TUM professors on the following topics: energy efficiency and climate protection, test procedures, product and plant safety, and compliance management. The program was replaced in 2016 with the Hans Fischer (Senior) Fellowship awarded by the TÜV Süd Foundation.

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Photos: Historisches Archiv TUM