Guidelines for Proposals for
IGSSE Project Teams – Call No. 14

Call closes: March 31, 2019, 11:59pm (GMT+2)
1. General introduction

The TUM International Graduate School of Science and Engineering (IGSSE) acts as the hub for innovative research across TUM departments and their international research partners. IGSSE combines academic excellence with high-profile doctoral education in small and flexible, interdisciplinary project teams. A comprehensive doctoral training program fosters international orientation as well as career and personal development.

Applicants can apply for two types of IGSSE project teams that differ structurally and conceptually:

- **TUM-internal IGSSE Project Teams** comprise senior scientists, doctoral researchers and students from at least two different TUM chairs, involving diverse departments, e.g. physics & aerodynamics or biology & chemistry (see section 6).

- **International IGSSE Project Teams** comprise senior scientists, doctoral researchers and students from one TUM chair and one international collaboration partner (see section 7).

IGSSE Project Teams are based on a co-funding model. For each IGSSE-funded doctoral researcher at TUM, the respective chair must complement the project team with an additional doctoral researcher ('associated doctoral researcher'), funded through other channels. IGSSE provides a budget for direct project related costs incl. travel and student helpers.

All TUM doctoral researchers in the project team will become members of the thematic graduate center IGSSE and the TUM Graduate School. The IGSSE qualification program and the TUM Regulations for the Award of Doctoral Degrees apply, including the qualification requirements specified there.

The current call for proposals ends at March 31, 2019. The following rules and guidelines apply.
2. Team setup and budget allocation

2.1. Principal investigators (PIs)

PIs submit proposals for project teams together with the designated PTL. For eligibility of TUM PIs, see §4 of the IGSSE Statute (http://www.igsse.gs.tum.de/index.php?id=20). All primary supervisors of doctoral theses integrated in the IGSSE Project Team (i.e. individuals who are entitled to award doctoral degrees at TUM: professors, emeritus professors, retired professors, TUM Distinguished Affiliated Professors, TUM Junior Fellows, or fellows of the TUM Institute for Advanced Study) must be listed as PIs in the proposal.

IGSSE aims to achieve a ratio of at least 20% of women also among PIs.

2.2. Project Team Leaders (PTL)

IGSSE Project Teams are led by a TUM post-doc, the Project Team Leader (PTL), who is responsible for setting-up the collaboration within the project, as well as the monitoring of its progress, financial controlling, interim and final reports. Project teams start with a kick-off meeting organized by the PTL introducing the team members. At the latest 24 months after that, each project team has to submit an interim report and a final report at the end of the project life-time.

The PTL will be the key contact for communication within the team and with the IGSSE management. They will mediate in cases of conflict and support the PIs in their supervisory role. The PTL is also in charge of administration, the team budget and organizing team meetings.

To foster project team communication, PTLs are urged to join the doctoral researchers in the workshop ’Project Team Toolbox’ as described in the IGSSE Qualification Program Guide (Annex 2).

PTLs are entitled to €8,000 for mobility and other direct project costs. Furthermore, they may apply for participation in specific personal development/qualification measures. They must already be nominated in the proposal.

2.3. Doctoral researchers

IGSSE funds two doctoral researchers in IGSSE TUM-internal Project Teams and one doctoral researcher in IGSSE International Project Teams. They receive a monthly stipend of €2,000 over three years provided that the progress of the doctoral project is positively evaluated after the first two years.

IGSSE TUM-internal Project Teams must have at least two additional associated doctoral researchers, and IGSSE International Project Teams at least one additional associated doctoral researcher. The co-financing model stipulates that these ‘associated doctoral researchers’ will receive their salaries/scholarships through the participating chairs.

IGSSE funding will start only after the associated doctoral researchers have become members of IGSSE. Apart from doctoral researchers in medicine, this will typically not delay the hiring of the IGSSE-funded doctoral researchers significantly.

IGSSE Project Teams should ensure diversity (e.g. internationality, gender) in the team composition.
2.3.1. Direct project costs

IGSSE TUM-internal Project Teams receive €8,000 and IGSSE International Project Teams receive €4,000 dedicated to funding direct project costs, e.g., computer equipment, chemicals, or laboratory equipment. The funds can also be used for recruitment costs, hosting project-relevant conferences, or inviting guests. PIs (including their project-related travel) cannot be supported.

2.3.2. Mobility funds

Part of the IGSSE Qualification Program is a compulsory research stay abroad of (at least) three months duration, for both IGSSE-funded and associated doctoral researchers. Each of up to four doctoral IGSSE members in IGSSE TUM-internal Project Teams and up to three in IGSSE International Project Teams receive up to €4,000 to help with travel and living costs abroad. Funds remaining after the research stay may be used for other travel (e.g. for conferences).

In addition, these doctoral researchers receive another €4,000 for personal travel including prolonged stays abroad, conferences, research visits, etc.

The mobility budget may be supplemented by the direct project cost money (but not vice versa). It cannot be transferred from one doctoral researcher to another. A redistribution of the budget amongst potential doctoral researchers is possible only before the start of the project.

2.3.3. Prolongation of scholarships

In case a doctoral researcher receiving an IGSSE scholarship has officially handed in his/her thesis 36 months after starting the doctorate, an extension of the scholarship of up to three months may be granted.

2.3.4. Qualification Program

All doctoral researchers must complete the IGSSE Qualification Program as outlined in Annex 2, complementing the TUM Regulations for the Award of Doctoral Degrees. This includes, e.g., registration with DocGS, participation in the TUM Graduate School Kick-Off Meeting, etc.

Mandatory elements of the IGSSE program are
1. Annual IGSSE Forum (at least 2 events)
2. Research stay at an international institution abroad (3 months)
3. Team Toolbox training (1/2 day)
4. i² Workshops (at least 1 workshop)
5. Science communication (at least 1 presentation)

Elements 1 and 3 should be accomplished as joint activities of the project team. Doctoral researchers of international collaboration partners can participate on a voluntary basis.
2.3.5. Recruitment

The PIs will ensure a transparent selection process for all doctoral researchers in the IGSSE Project Team. The positions should be advertised by the PIs internationally in discipline-specific announcements and through other media. The IGSSE management office will be happy to post the positions on the IGSSE website.

2.4. Student assistants

IGSSE TUM-internal Project Teams may request up to €8,000 and IGSSE International Project Teams may request up to €4,000 to employ student assistants (master’s students, ‘WiHis’). This money is earmarked and cannot be used for other purposes.

3. Proposals

Central to the proposal are descriptions of the thesis projects of all participating doctoral researchers (including associated doctoral researchers). These descriptions should be supplemented by a summary of the research field and own preparatory work. Furthermore, the application must contain a concept that ensures close cooperation between the members of the IGSSE Project Team and the joint training of doctoral researchers. It should also detail anticipated collaboration with international partner institutions including plans for organizing the mandatory international 3-month research stays abroad for all TUM doctoral researchers. In IGSSE International Project Teams, the doctoral researchers associated with the project should visit TUM for an extended period (e.g. three months). A clear concept of the interdisciplinary collaboration of the team and envisaged doctoral training modules are key elements in the proposal reviewing process.

Proposals should include a rough work schedule and must be signed by the PIs and the nominated PTL. Submitted proposals must not exceed 10 pages in length. The 10-page limit includes all appendices (in particular references) with exception of reports on previous IGSSE Project Teams and CVs of PIs and PTLs.

In the proposal, a future perspective on how to develop the project beyond the IGSSE horizon should be elaborated (e.g. externally funded research group, joint publications, spin-offs).

3.1. Evaluation procedure

All project proposals are subject to an evaluation procedure performed by the IGSSE Board and external referees.

To optimize the search for referees, we ask all PIs to provide (via separate email at the time of submitting the proposal) contact data (name, email, affiliation) for four individuals that are familiar with the research fields, but do not have conflicts of interest. In particular, they must not have joint publications or other scientific work with the proposing PIs. Before submitting the proposal, the PIs must ensure that potential referees will provide a review if contacted by IGSSE. For further details, see Annex 1 – Proposal Template.

In a first step, the IGSSE Board will review all proposals and examine whether an application matches the IGSSE goals both conceptually and structurally. These aspects include primarily interdisciplinarity (plans for exchange across disciplines, regular team meetings, potential job shadowing initiatives within the team, etc.) and internationality (projects should exhibit strong international components, e.g. research visits, hiring of international doctoral researchers, presence at conferences, invitation of guest researchers, publications including external part-
Projects not living up to the expected standards will be rejected and excluded from the subsequent reviewing process.

Following this, proposals will be evaluated by two external referees. To this end, the board will usually select one referee from the proposer’s suggestions and identify another themselves. The external reviewers will evaluate primarily scientific excellence, but consider the interdisciplinary requirements as well.

After that, the IGSSE Board reconvenes and takes the final decision. In case of comparable reviews, the board will pay attention to further aspects, e.g., distribution of projects amongst all TUM departments, distribution of topics, interdisciplinary orientation, international networks, internationality and diversity of the team. Projects with young researchers acting as PIs might be favored in direct comparison.

Moreover, diversity is an aspect of increasing importance, which should be reflected in the proposal, e.g. by hiring female doctoral researchers and/or doctoral researchers from abroad.

In summary, the evaluation procedure adheres to the following process:

- Proposals are screened by the IGSSE Board and applications not matching the IGSSE criteria are rejected.
- Remaining proposals are evaluated by at least two external referees from different science branches.
- The IGSSE Board reviews the referee reports and decides on the basis of available funding and all evaluation criteria.
- After the Board decision, the IGSSE Management Office prepares excerpts from the referee reports and the IGSSE Board’s discussion and forwards them to the proposers together with the official letter of acceptance or rejection. Further information or the full report will not be provided.

4. Public relations

IGSSE Project Teams shall establish links on their web pages to the IGSSE website. They shall give credit to IGSSE in all scientific activities (e.g., papers, conference contributions, etc.).

As part of the IGSSE Qualification Program (see Appendix 2), doctoral researchers must present their IGSSE project in at least one ‘Science to the public’-event (e.g. open house day, ‘Lange Nacht der Wissenschaft’, or a popular science article in a magazine).

5. Miscellaneous

All funds are administered through IGSSE and granted upon request and availability of funds. IGSSE reserves the right to alter funding schemes at any time.

6. TUM-Internal Project Teams

IGSSE TUM-Internal project teams integrate approaches and methods from at least two diverse disciplines (involving two different TUM departments) towards a common scientific goal. A clear concept of the interdisciplinary collaboration of the team and envisaged doctoral training modules are key elements in the proposal reviewing process.
IGSSE awards scholarship grants and training funds to interdisciplinary Project Teams typically consisting of

- four doctoral researchers (two IGSSE-funded doctoral researchers and two associated doctoral researchers who also become members of IGSSE). All doctoral theses must be elaborated on in the proposal;
- an IGSSE Project Team Leader at TUM (PTL; typically a postdoc);
- two or more IGSSE Principal Investigators at TUM (PIs; typically professors) from at least two different TUM departments.

7. International IGSSE Project Teams

To strengthen TUM’s network across the globe and to promote the mobility of doctoral researchers, IGSSE supports international scientific collaboration and staff exchange. In this call for proposals, IGSSE targets collaboration with:

- Its partner universities in the EuroTech Universities Alliance
  - Danmarks Tekniske Universitet (DTU)
- Universities/ research institutions in Africa.

Applications for IGSSE International Project Teams are possible only if the co-applicant is from one of these focus regions / universities.

IGSSE awards scholarship grants and training funds to international project teams typically consisting of

- at least one PI at TUM and one additional PI affiliated with a partner university abroad;
- one PTL at TUM;
- one IGSSE-funded doctoral researcher and one or two associated doctoral researchers at TUM, all becoming members of IGSSE;
- one or more doctoral researchers working on the project’s subject affiliated to the international partner.

In an IGSSE International Project Team, one half of the project is provided by an external partner institution. This partner must employ at least one doctoral researcher to work on the topic of the project. Ideally, they should match TUM’s funding and setup, i.e. bring two doctoral researchers into the project and send them to

Guidelines for IGSSE Project Team proposals
TUM for an extended research stay abroad. All doctoral theses must be elaborated on in the proposal.

The PIs (including the PI at the partner university) typically share the supervision or mentoring of the doctoral researchers.

Applicants should provide a mobility and communications plan for the entire International IGSSE Project Team (including descriptions of the partner’s doctoral researchers’ thesis topics). At least one annual meeting of all members involved in the project is required. Partner institutions must provide a letter confirming an understanding of these regulations together with the proposal.

Laura-Bassi-Fellowships
We expect that also this year, TUM.Diversity will offer postdoc fellowships to female candidates from Africa. As in the last call, IGSSE will supplement this offer with funds for travel and student helpers if the Laura-Bassi fellow is attached to an approved IGSSE project. Interested applicants are invited to contact Eva Sandmann for details on the Laura-Bassi call (sandmann@zv.tum.de). Additionally, the intent to apply for the fellowship should be indicated under Section 2.2 in the proposal template for the IGSSE call.

8. Appendix

- Annex 1 – Proposal Template
- Annex 2 – Qualification Program Guide