

Guidelines for proposals for Independent IGSSE Project Teams

Call for proposals No. 12, Issue date: 15 May 2017



1. Introduction

With IGSSE, the Technical University of Munich provides research opportunities and innovative doctoral training at the interface of science, engineering and/ or medicine. Interdisciplinary project teams integrate approaches and methods from at least two diverse disciplines towards a common scientific goal. A comprehensive doctoral training program fosters international orientation as well as career and personal development.

A clear concept of the interdisciplinary collaboration of the team and envisaged doctoral training modules are key elements in the proposal reviewing process.

IGSSE Project Teams comprise senior scientists, doctoral researchers and (optionally also) students *from at least two different TUM chairs, involving diverse departments*, e.g. physics & aerodynamics or biology & chemistry. International IGSSE Project Teams comprise senior scientists, doctoral researchers and students from one TUM chair and an international collaborator partner/ institution.

Please note that international projects do not only differ structurally from TUM-internal projects – there are conceptual differences as well (see Section 2.6).

IGSSE Project Teams are based on a co-funding model. *For each IGSSE-funded doctoral researcher, the respective chair has to complement the project team with an additional doctoral researcher ('associated doctoral researcher'), funded through other channels.* A consumables budget is provided by IGSSE for all doctoral researchers in the project team.

As all IGSSE doctoral researchers are members of the TUM Graduate School, the TUM Regulations for the Award of Doctoral Degrees apply, including the qualification requirements specified there.

Principal Investigators

PIs from TUM or, in case of international project teams, renowned partner universities

Doctoral Researchers

PIs co-fund 2 or 3 candidates from other sources, e.g. third-party funds

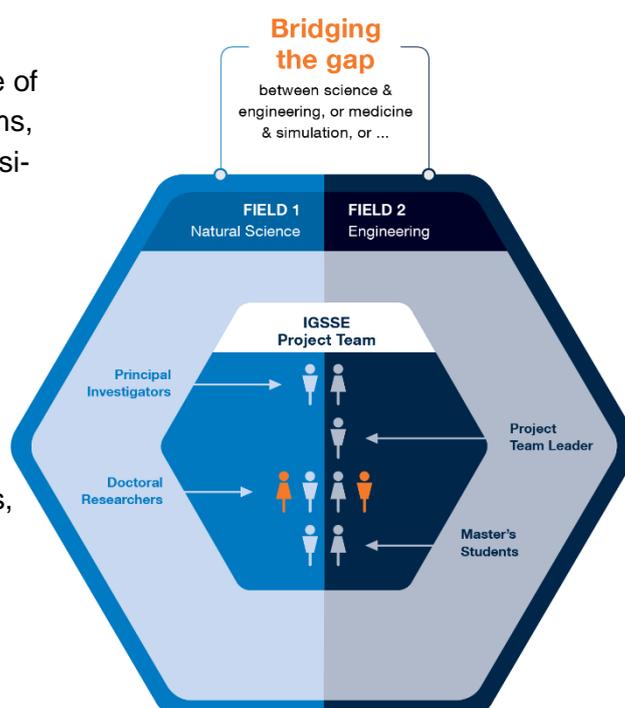
IGSSE funds 2 doctoral researchers with 3-year scholarships

Project Team Leader

Postdoc to lead project scientifically and manage cooperation & exchange

Master's Students

Training of ambitious students



2. General guidelines and budget allocation

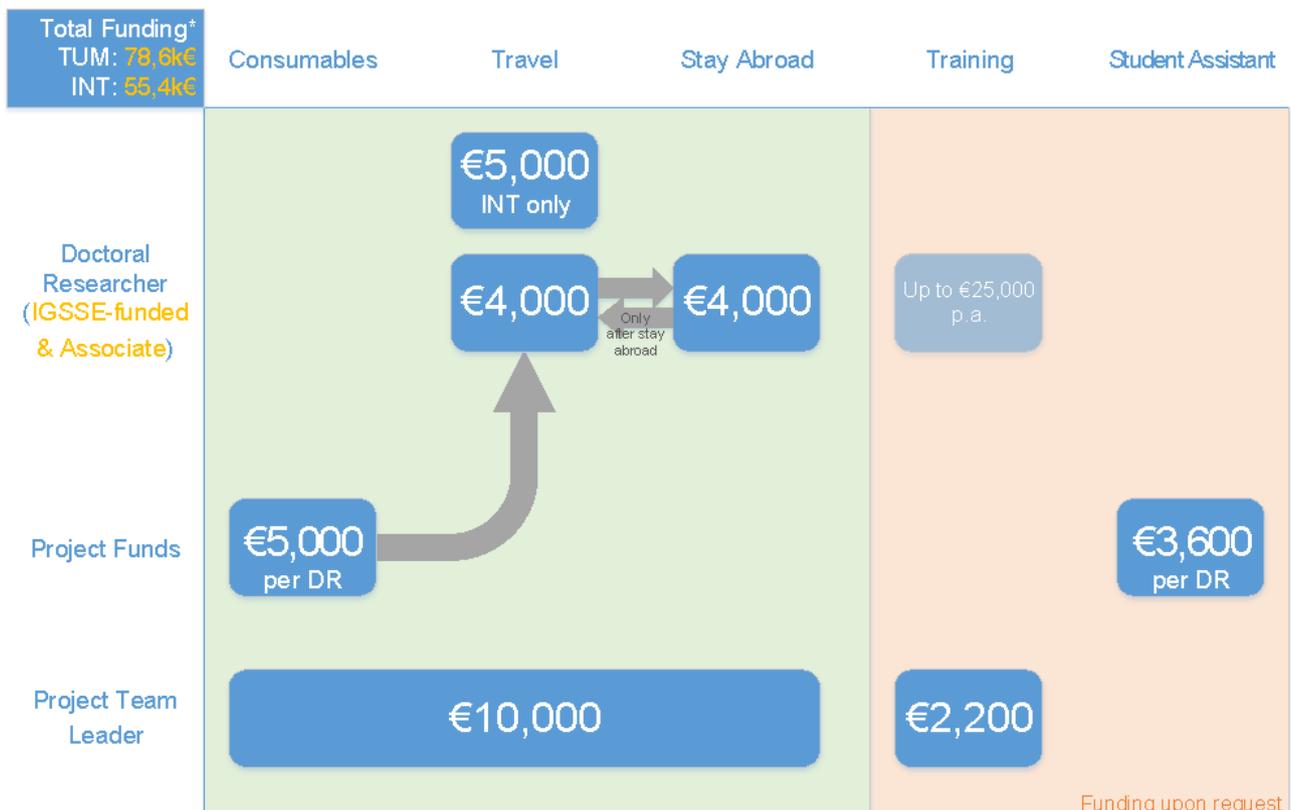
IGSSE awards scholarship grants and training funds to interdisciplinary Project Teams typically consisting of at least four doctoral researchers, an IGSSE Project Team Leader (PTL; typically a postdoc) and two or more IGSSE Principal Investigators (PIs; typically professors) from at least two different fields in science and engineering/ medicine. Applicants can apply for either

- a TUM-internal IGSSE Project Team (at least two PIs at TUM; one PTL at TUM; two IGSSE-funded doctoral researchers and two associated doctoral researchers who also become members of IGSSE), or

In response to the large number of applications in recent calls, *PIs and PTLs can only participate in one proposal* at a time. In particular, individual chairs can only host IGSSE-funded doctoral researchers in one project. As a result, hosting chairs of PIs with on-going projects from the previous two years, i.e. IGSSE Calls 10 and 11 cannot apply at this time.

- an International IGSSE Project Team (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 an associated doctoral researcher who joins IGSSE; one or more doctoral researchers working on the project's subject affiliated to the partner).

The following rules and guidelines apply.



*Over project lifetime for teams with 4 (TUM) or 2 (INT) doctoral researchers; TUM: TUM-internal project; INT: international project

2.1. Proposals for Project Teams

The current call for proposals ends at 2 July, 2017. The application has to 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 obligatory international 3-month research stays abroad for all four doctoral researchers.

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.

Thesis projects of all participating doctoral researchers (including associated doctoral researchers) must be described in the proposal. Proposals are expected to include a rough work schedule and must be signed by the PIs and the nominated PTL.

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).

To optimize the search for referees in the reviewing process, we request 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 fields of research, but are not subject to conflicts of interest. In particular, they must not share publications or other scientific work with the proposing PIs. *Note that the PIs are responsible that one of these persons will actually provide a review.* IGSSE expects that the proposers establish contact with the reviewers before handing in the proposal. In the process, the potential referees should have agreed to provide a

review if contacted by IGSSE. For further details, see Annex 1 – Proposal Template.

2.2. 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 (www.igsse.tum.de/about-igsse/organization/igsse-statute.html). *All supervisors of doctoral theses integrated in the IGSSE Project Team (i.e. at least two 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 requests that the doctoral researcher's supervisors are PIs on the proposal.

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

2.3. 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, the interim and final reports. Project Teams start with a kick-off meeting organized by the PTL introducing the team members. At the latest 18 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 the organization of team meetings.

To foster the 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 €10,000 for mobility and consumables and €2,200 for specific personal development/ qualification measures. They must already be nominated in the proposal.

2.4. Doctoral researchers

One doctoral researcher each is financed at two participating chairs through IGSSE (both 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. The doctoral researchers' interim evaluation incorporates a documented feedback talk and timely submission of their personal interim report.

At least two additional researchers (associated members) are to be funded by the participating department(s) ('co-financing model'). IGSSE funding will only start after the associated doctoral researchers have become members in IGSSE. Apart from doctoral researchers in medicine (see box below), this will typically not delay the hiring of the IGSSE-funded doctoral researchers significantly.

TUM-internal IGSSE Project Teams should host at least two international doctoral researchers (i.e. 2 out of 4 IGSSE-funded and associate positions). Furthermore, at least one doctoral researcher in each IGSSE project should be female.

2.4.1. Consumables

For each doctoral researcher in the IGSSE Project Team (i.e. doctoral researchers who have become members of IGSSE as part of the project), the project receives €5,000 dedicated to buying consumables or durable goods like e.g. computer equipment, chemicals, or laboratory facilities. It can also be used for recruitment, hosting project-relevant conferences, or invitation of guests. *PIs (including their project-related travel) cannot be supported.*

This money is pooled for each participating chair (i.e. in a typical project, each chair hosting two doctoral researchers receives €10,000). By mutual agreement this budget may be transferred freely from one chair to another.

2.4.2. Qualification Program

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

Mandatory elements of the program are

1. Annual IGSSE Forum (minimum 2 participations)
2. Research stay abroad an international institution abroad (3 months)
3. Team Toolbox training (1/2 day)
4. i³ Workshops (minimum 1 participation)
5. Science communication (minimum 1 presentation)

Elements 1, 3, 5 should be organized as joint activities of the Project Team. For details see Annex 2.

IGSSE Project Teams involving medical sciences

TUM doctoral researchers of Klinikum rechts der Isar (MRI) or Deutsches Herzzentrum München (DHM) aiming for a 'Dr.rer.nat.' have to enrol in the doctoral program 'experimental medicine' at the Medical Graduate Center (MGC) *prior* to their IGSSE membership. As the enrolment process is fully under MGC governance and may take three or more months, it is crucial to register at the MGC as soon as possible to minimize any possible delay for IGSSE funds (see Section 2.4). Furthermore, PIs with a membership at a TUM department other than the Medical School ('Zweitmitgliedschaft') are encouraged to enrol their doctoral researchers via this department.

2.4.3. Mobility funds

Part of the IGSSE Qualification Program is a compulsory research stay abroad of (at least) three months' duration in total, for *both IGSSE-funded and associated doctoral researchers*. They receive up to €4,000 respectively 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, *all doctoral researchers can receive further €4,000 for personal travel* including prolonged stays abroad, conferences, research visits, etc.

The mobility budget may be supplemented through the consumables money.

2.4.4. Recruitment

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

2.4.5. Prolongation of scholarships

In case the doctoral researcher has officially handed in his/her thesis 36 months after starting the doctorate, an extension of the scholarship of three months may be granted. If the thesis is not finished after three years, the main supervisor secures funds that support the doctoral researchers to finish their individual project.

2.5. Student assistants

The Project Teams may request up to €3,600 per doctoral researcher to employ student assistants (master's students, 'WiHis'). This money is earmarked and cannot be used for other purposes.

As with the consumables, this money is pooled for each chair and by mutual agreement may be transferred from one to the other chair.

2.6. Additional conditions for International IGSSE Project Teams

Apart from TUM-internal Project Teams, IGSSE also funds International Project Teams. In an International IGSSE Project Team, one half of

the project is provided by an external partner institution. This partner has to 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. Typically, the external partner institution should also act as host for TUM's doctoral researchers' stays abroad.

At TUM, IGSSE funds one doctoral researcher with the involved TUM chair supplying at least one associated doctoral researcher. 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 IGSEE 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. To compensate for higher travel costs between project partners, each IGSSE doctoral researcher at TUM can receive €5,000 in addition to the normal travel budget. Partner institutions must provide a letter confirming an understanding of these regulations together with the proposal.

2.7. Public relations

Funded IGSSE Project Teams will establish links on their web pages to the IGSSE web site. They shall also give credit to IGSSE in all scientific activities (including papers, conference posters/ presentations).

As part of the IGSSE Qualification Program (see Annex 2), the doctoral researchers have to 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).

2.8. Miscellaneous

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

3. Evaluation criteria and procedures

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

First, 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 meetings of the team, potential job shadowing initiatives within the team, etc.) and internationality (external partners, stays abroad, presence at conferences, invitation of guest researchers, publications including external partners, etc.). 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 will be asked to respect the interdisciplinary requirements as well.

When all external reviews are available, the IGSSE Board reconvenes and takes the final decision. In the process all available results will be compiled and examined. In case of comparable reviews, the board will also pay attention

to aspects like distribution of projects amongst all TUM departments, interdisciplinary orientation, international networks, internationality and diversity of the team. Also, International IGSSE Project Teams might be given preference. Last but not least, projects with young researchers acting as PIs might be favored in direct comparison.

The project should exhibit a strong international component demonstrated e.g. through research visits at international partner institutions by the doctoral researchers, inclusion of international guest researchers and hiring of international doctoral researchers.

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 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. Appendix

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