IGSSE Forum 2017

Manage your career

29 - 31 May 2017
TUM Science and Study Center | Raitenhaslach
Dear IGSSE members,

a warm welcome to the 11th IGSSE Forum in Raitenhaslach

This year, our graduate school’s annual meeting looks back on a decade of progress and special activities, and looks forward to three exciting days of discussion and of sharing thoughts and experiences on the great value of interdisciplinary studies. Back in 2007, IGSSE launched specially designed workshop formats and topics that, from 2009, have been taken up by TUM Graduate School’s seminar offerings. These, in turn, have enabled IGSSE to vary topics every year. Policy briefs, the varieties of scientific communication, scientific and societal interdependencies - to name only a few - are impressive proofs that our philosophy on doctoral training concepts is sound and successful. This year’s forum is thematically designed to stimulate reflection and discussion of careers after a doctorate. Our experts from industry, funding agencies, the sciences and politics, as well as some of our alumni, are not only ready to convey insights into their daily work but also to share their personal experiences with you and to discuss possible career paths.

I am very happy that we are able to complement these presentations by a parallel session, the „Career Café“. Developed out of the successful „peer-to-peer coffee talk“ in 2016, IGSSE Board members will join our alumni for several round table discussions and are ready for your questions and dialogue. Of course, we can only give a short glimpse in the working life after a doctorate. But the new IGSSE qualification program provides you with more opportunities for engaging with scientists and engineers who truly know and appreciate the value of interdisciplinary education and work.

I hope we will all depart this meeting with renewed enthusiasm, with new friends and acquaintances, with higher expectations for success in our professional lives, and with an appreciation that the IGSSE approach to interdisciplinary work enriches our learning experiences and has been and will be of great personal value.

I am looking forward to inspiring insights, to interactive workshops, to networking within the IGSSE family and across the disciplines and, of course, to having a great time.

Prof. Dr. Barbara Wohlmuth
IGSSE Director
Program

Monday, 29 May
10:00  Arrival & baggage drop-off Raitenhaslach
10:30  Welcome
11:30  Poster session & lunch
15:00  Keynote Dr. Fridolin Stary: Create yourself in industry
16:00  Posterblitz
17:00  IGSSE bowl
19:00  BBQ
21:00  Hotel shuttle & check-in hotels

Tuesday, 30 May
09:00  Peer perspectives
10:00  Morning workshops
13:00  Lunch
14:00  Afternoon workshops
18:00  Reception at Klostergasthof Raitenhaslach
19:00  Festive dinner, certificate ceremony & party
22:30  Hotel shuttle 1
23:30  Hotel shuttle 2
00:30  Hotel shuttle 3

Wednesday, 31 May
08:30  Hotel check-out
09:30  Day briefing & PhD Council meeting
10:00  Keynote Dr. Thomas Jørgensen: Mobility in a closing world
11:00  Career Fair & Career Café
13:30  Lunch
14:30  Departure

Please note:
Photos and videos will be taken during the event. All pictures and videos will be used for IGSSE-related purposes only. Please inform the IGSSE team if you mind being seen in respective media.
Poster session  
Monday, 11:30

The poster session serves as a scientific exchange platform and is the 1st stage of this year’s poster competition. To rate a presentation (scientifically well-designed, easy to understand, interesting topic)

- each doctoral researcher receives 3 red stickers,
- he/she places red stickers to his/her best-liked poster,
- stickers may be distributed to three, two or one poster,
- stickers have to be placed until 14:45.

Posterblitz  
Monday, 16:00

The Posterblitz is the 2nd stage of the 2017 poster competition, in which

- the eight best-rated posters are presented in a 3-minute Posterblitz by one team member,
- all attendees cast one vote for the winning poster on a ballot paper.

The winners will be announced during the course of the festive dinner on 30 May.

Keynotes and talks

Create yourself in industry  
Monday, 15:00

Speaker **Dr. Fridolin Stary** is Head of central Research and Development at Wacker Chemie AG/ Burghausen. He received his PhD from TU Graz/ Austria in 1980 and pursued his professional career across several countries (e.g. Lyibia, Russia, France) before starting to work for Wacker Chemie in 1984. Dr. Stary’s career there embraces diverse positions, including a technical directorship in Brazil.

Peer perspectives  
Tuesday, 09:00

EuroTech doctoral researchers

**Weitian Zhao** | 3rd year | Materials Science and Engineering | EPF Lausanne/ Switzerland

**Giulia deZotti** | 2nd year | Department of Applied Mathematics and Computer Science | Danish Technical University/ Denmark
Peer perspectives (continued)

IGSSE alumnus
Dr. Michael Lieb | IGSSE Alumnus 2014 | Lead IT Project Manager BMW Group

Mobility in a closing world
Wednesday, 10:00

Speaker Dr. Thomas Jørgensen is Senior Policy Coordinator at the European University Association (EUA). His responsibilities include ensuring coherent policies for universities as well as overall policy development and managing cross-cutting issues with policy relevance after being EUA’s Head of the Council for Doctoral Education for a number of years. In 2004, Dr. Jørgensen received his PhD in History and Civilization from the European University Institute in Florence/Italy.

Workshops - morning session
Tuesday, 10:00-13:00

IGSSE aims to trigger a view beyond the conventional career paths in this year’s workshops. The trainers will introduce career paths ranging from individual career planning to a practical look behind the scenes in industrial and academic careers.

1. Startup: Progressing from science to entrepreneurship

Dr. Oliver Trinchera | Founder & Managing Director | KINEXON

Universities are a major source of innovation. Many successful companies have their roots in academia - either because the ideas result from cutting-edge research projects or because the founders had a strong background and network in academia which triggered the foundation of their company. But how can great ideas be transformed into technologies? How can these technologies be used to derive fascinating products? Last but not least: How can great products be combined with an adequate and sustainable business model? The workshop will answer these questions and provide scientists with a deep insight into the topic of entrepreneurship. Moreover, including particularities of foundations originating in science. This workshop will also shed a light on the ingredients of successful start-ups and the required skillset of founders and their team. Hightech industry foundations will be focussed especially.
2. Career paths at German Universities of Applied Sciences

Prof. Dr. Elke Wolf | Faculty of Industrial Engineering | Munich University of Applied Sciences
Claus Lange | Executive Director UAS7

The workshop aims to inform about career opportunities as a professor at Universities of Applied Sciences (UAS) in Germany. It introduces the UAS7 network, highlights the role of UAS within the German higher education system, and illustrates the prerequisites for a professorship at a University of Applied Sciences. The goal is to show prospective candidates interested in an academic career that there are alternative pathways towards a professorship beyond the positions at universities in Germany. In addition, the workshop presents the dynamic and supportive academic community with high teaching and research standards as well as academic freedom and opportunities for having an immediate impact on sustainable development (especially by influencing regional structures) at Universities of Applied Sciences.

3. From research to innovation - careers in industrial R&D

Dr. Carlos Härtel | CTO & Chief Innovation Officer | GE Europe

Research in academia and industry has many similarities since both apply the same scientific principles and methods. A major difference between the two, however, lies in their objectives: While academic research primarily seeks fundamental understanding, industrial R&D aims at improving products and technologies. Being aware of this difference can help PhD graduates in their transition from university to industry.

The Workshop will address the following aspects of research in technology-oriented companies:

• what are the success factors and what performance metrics are used in industrial R&D?
• the critical competencies for a successful career: domain depth and breadth
• elements of good project management and team management in industrial R&D
• the role(s) of R&D in a business, and how research interfaces with other business functions
• careers options for researcher in industry: the technical and the managerial career ladder
4. European research funding: Marie Skłodowska-Curie Individual Fellowships

**Felix Beckendorf | Programme Coordinator of the German National Contact Point for Marie Skłodowska-Curie actions**

The workshop focusses on the Marie Skłodowska-Curie Individual Fellowships, the career development action for experienced researchers provided by the European Union within the Framework Programme for Research and Innovation, Horizon 2020. The participants will be informed about the various funding opportunities offered within the scope of these individual fellowships, namely the European Fellowships (research stay of 1-2 years in a European country) and the Global Fellowships (research stay of 1-2 years outside of Europe with a mandatory return phase to Europe). This introduction will be followed by guidance on how to write a winning Marie Skłodowska-Curie Individual Fellowship research proposal. Last but not least, tips on writing successful research proposals in general will be given.

5. Non-university research institutions in Germany

**Dr. Anke Soemer | Human resources development | Fraunhofer-Gesellschaft**

The German R&D System offers various forms of research locations: universities, non-university institutes, institutions run by federal or state (Länder) authorities and companies. This workshop focusses on the career opportunities in non-university research institutions. After giving an overview of the structures, funding and the different missions of the non-university research institutions like the Fraunhofer-Gesellschaft, Helmholtz-Gemeinschaft, Max-Planck-Gesellschaft, the Wilhelm-Leibniz-Gemeinschaft and some more institutions in the German R&D system, you will learn about career paths as a scientific staff member, Postdoc or Group Leader. The goal of the workshop is to give you an idea of how to position yourself in scientific environments to boost your personal career paths.

6. Career paths in science journalism and science communication

**Dr. Jan-Martin Wiarda | Journalist for education and science | ZEIT ONLINE author**

In this workshop participants will be provided with an overview of the changing media landscape. They will discuss how this change affects the career options in science journalism and learn about the growing importance and the
professionalization of science communication. There will also be a short practical exercise involving the writing of a news story. Finally, there will be an open discussion on possible ways into science journalism and science communication. Having visited the workshop, participants should be able to assess whether pursuing a career into science journalism and communication is a realistic and viable option for them.

7. How to consolidate an international research career

Dr. Thomas Koch | Founder | academicfutures

Taking an international perspective, the workshop addresses the particularities of conducting research in higher education institutions, explores essential management skills to become an independent researcher and raises strategic issues in career development. It aims to assess the current position and to identify career options for researchers within but also beyond academia.

By participating in the workshop you will be better equipped to
- identify the dimensions of your current researcher position at your institution
- understand the broader context in which research is conducted
- appreciate what is important and essential both in your current and future roles as a researcher
- translate competencies acquired as a researcher to non-academic settings
- get realistic goals for career development.

8. From research to business: Entrepreneurship as a career opportunity

Dr. Annette Leonhard-MacDonald | CEO | Leonhard-MacDonald Ventures GmbH

This workshop is designed for doctoral researchers looking for an alternative to an academic career. The goal of this workshop is to discover your entrepreneurial potential and to learn how you can apply your research in a commercial context. Entrepreneurial thinking is not only important for starting your own business but is also a vital skill for marketing innovations and finding industry partners. This workshop will teach you the basics of research commercialisation and give you the opportunity to learn how to make a business case using concrete examples.
Workshops - afternoon session  
Tuesday, 14:00-17:00

1. Troubleshooter between two worlds: Perspectives of and in science management

**Dr. Markus Zanner** | Chancellor | University of Bayreuth  
**Dr. Christiane Wüllner** | Managing Director | RUB Research School

In this workshop, the trainers present and discuss the opportunities and challenges of science management regarding
- the actual tasks of a science manager at various institutions
- the key competences necessary to cope with the challenges of this working field
- the areas/fields that ask for professional science managers.

2. Fortschritt täglich erleben – als Patentprüfer/in am Deutschen Patent- und Markenamt (in German)

**Dr. Rolf Brucksch, MBC** | Patentprüfer | DPMA

Im diesem Workshop möchte ich Ihnen meinen Arbeitgeber, das Deutsche Patent- und Markenamt (DPMA), vorstellen und anhand von Beispielen und Übungen zeigen, was Sie sich unter der Tätigkeit der Patentprüferin bzw. des Patentprüfers vorstellen können. Auch sollen Sie an sich selbst testen können, ob diese Tätigkeit zu Ihnen passen würde und Sie sich in dieser Funktion vorstellen können. Nicht zuletzt gebe ich Ihnen einen Ausblick auf die Einstellungsvoraussetzungen und Entwicklungsmöglichkeiten beim DPMA.

Wenn Sie also gerne lesen, an Innovationen interessiert sind, entschlussfreudig sind, aber auch Spaß an der selbstständigen Arbeit haben, ohne auf die Vorzüge des öffentlichen Dienstes verzichten zu wollen, dann sind Sie in meinem Workshop genau richtig und herzlich willkommen!

3. Postdoctoral funding opportunities of the Bavarian Research Alliance (BayFOR)

**Dr. Panteleimon Panagiotou** | Head of Unit Information & Communication Technologies/ Engineering & Natural Sciences | BayFor  
**Gabriela Blumberger** | Scientific Officer Initial Training Network (ITN) programmes within Horizon 2020 | Project manager INNOVIP | BayFor
The workshop addresses early researchers (doctoral researchers, Postdocs) who want to acquire public funding. It aims to give an overview of application processes and share lessons learned from previous applications. The speakers will present the structure of an EU project, the setup of a project proposal and the support researchers can get from BayFOR when applying for Horizon 2020 funds. Special attention will be given to project management and dissemination issues. The EU project INNOVIP will be showcased as best practice. BayFOR is a company funded by the State of Bavaria supporting Bavarian universities and SMEs to apply for European funding.

4. Career paths at a global player: Wacker Chemie

Markus Huber | HR Marketing & Talent Management Personal
Dr. Peter von Zumbusch | Vice President Engineering Wacker Silicones
Dr. Silvia Teuber | Staff Executive

The workshop is focussed on active exchange with Wacker Chemie executive leaders. Participants will visit the Wacker Chemie plant in Burghausen to meet and interview the professionals on their career development as well as the key aspects important to their individual career paths. The Wacker representatives will give their personal views on useful skills for a successful career. The participants will prepare a presentation with the acquired recommendations and have the opportunity to engage in a discussion of the results. The workshop will be completed with further information about talent management at Wacker Chemie.

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Career Fair and Career Café
Wednesday, 11:00

Representatives of companies, funding agencies and career consultants at the first IGSSE Career Fair are looking forward to meet doctoral researchers trained to think and communicate in interdisciplinary settings. Find all presenting companies from page 14 onwards. The Career Fair is complemented by the IGSSE Career Café where you can meet and discuss your thoughts with our alumni, representatives, and partners of our graduate school. The round table talks (25-minute-sessions, starting at 11:15) will refer to the questions posed during the registration process. Join at

Table 1: Challenges and opportunities in non-academic careers
IGSSE Board Member Prof. Wolfram Volk, Alumni Dr. Sarah Hintermayer (Evonik), Dr. Michael Lieb (BMW), Dr. Andreas Maier (AdjuCor), Dr. Claudia Palumbiny (Infineon), Dr. Dan Horia Popescu (Infineon)

Table 2: The dos and don’ts in pursuing an academic career
Former IGSSE PTL Dr. Martin Ruess (University of Glasgow), DFG representative Dr. Jürgen Breitkopf, Alumna and Board Member Prof. Petra Liedl (University of Texas at Austin/ TUM IAS Fellow)

Table 3: Definitions of a successful career
IGSSE Board Members Prof. Rainer Burgkart, Dr. Eva Sandmann, Prof. Barbara Wohlmuth, Alumni Dr. Gerrit Buse (TNG Consulting), Dr. Petra Dorfner (Dynamic Biosensors), Dr. Michael Lieb (BMW)

1. Dynamic Biosensors

Dr. Petra Dorfner (meet also at Career Café)

Dynamic Biosensors GmbH is a biotech company based in Munich, manufacturing high-performance instruments and biochips for the analysis of biomolecules. The award-winning switchSENSE® technology is used in life science research in academic and industry laboratories in the areas of molecular interaction analysis and drug discovery. Beyond the science, Dynamic Biosensors is buzzing with ideas, nice people, and fueled by entrepreneurial spirit.

2. Evonik: Core specialty chemicals business

Dr. Sarah Hintermeyer (meet also at Career Café)
Daniela Obermeier
Evonik is one of the world’s leading specialty chemicals companies. The central elements of our strategy for sustained value creation are profitable growth, efficiency and values. Around 80 percent of sales come from market-leading positions, which we are systematically expanding. We concentrate on high-growth megatrends, especially health, nutrition, resource efficiency and globalization.

3. Infineon

Dr. Claudia Palumbiny (meet also at Career Café)
Dr. Dan Popescu (meet also at Career Café)
Dr. Christian Westermeier

Infineon designs, develops, manufactures and markets a broad range of semiconductors and system solutions. The focus of its activities is on automotive electronics, industrial electronics, RF applications, mobile devices and hardware-based security. Infineon’s components play an essential role wherever energy is generated, transmitted and used efficiently. Furthermore, they safeguard data communication, improve safety on roads and reduce vehicles’ CO2 emissions.

4. DFG

Dr. Jürgen Breitkopf (meet also at Career Café)
Dr. Daniel Pursche

The DFG is the self-governing organisation for science and research in Germany. It serves all branches of science and the humanities. In organisational terms, the DFG is an association under private law. Its membership consists of German research universities, non-university research institutions, scientific associations and the Academies of Science and the Humanities. The DFG receives the large majority of its funds from the federal government and the states, which are represented in all grants committees. At the same time, the voting system and procedural regulations guarantee science-driven decisions.

5. Kinexon

Dr. Oliver Trinchera
Lena Weber

We build state-of-the-art sensor networks and web based applications for industries like manufacturing, logistics, sports & media and retail. Core of our solution is a cutting edge radio technology for high precision localization and motion sensing of objects and people. Our awarded solution is a key technology for the Internet of things and an enabler for the smart
factory of the future.  
Become an integral part of KINEXON and take on early responsibility in a young and dynamic company with flat hierarchies. Our team is engineering driven and passionate about solving challenges and building great things.

6. Wacker Chemie AG

Marcus Huber  
Katrin Entholzer

WACKER is a globally active chemical company with some 17,200 employees and annual sales of around 5.4 billion (2016). Spanning the globe with five business divisions, we currently operate 25 production sites worldwide. WACKER is represented by subsidiaries and sales offices in 31 countries in the Americas, Asia, Australia and Europe.

7. UAS7 – German Universities of Applied Sciences

Claus Lange

UAS7 is the alliance of seven leading universities of applied sciences, recognized for their commitment to excellence in teaching, their strong professional and international orientation and their focus on applied research. UAS7 represents a broad variety of about 600 degree programs at the undergrad and grad levels with 105,000 students. 2500 full-time faculty members and several thousand part-time lecturers from industry and business study, teach, and research in Berlin, Bremen, Cologne, Hamburg, Munich, Münster, and Osnabrück. The alliance members collaborate with 1,500 university partners worldwide.

8. DPMA

Petra Würz  
Veronica Czech

9. AdjuCor

Dr. Andreas Maier (meet also at Career Café)

AdjuCor is an interdisciplinary start-up company that engages in medical, biological and engineering problem statements and specifically develops high-tech medical devices to address heart disease. The company’s mission is to enable patients suffering from heart attack or heart insufficiency to regain quality of life, by a reduction of associated symptoms and an improvement of physical constitution.

10. TUM Talent Factory

Dr. Bettina Joachimsthaler

The TUM Talent Factory’s services support talented young TUM scientists with
• individual assistance in selecting suitable national and international funding instruments (including from the Alexander von Humboldt Foundation (AvH), the German Academic Exchange Service (DAAD), the DFG and Marie Skłodowska-Curie Actions (MSCA))
• feedback for those submitting their first proposals, including proposal advice from TUM Emeriti of Excellence
• events and workshops.

11. TNG Technology Consulting GmbH

Dr. Gerrit Buse (meet also at Career Café)

TNG Technology Consulting is a value-based consulting partnership focused on high end information technology. We support our customers with services in three areas: Agile Software Development, Administration & Operations and IT Management. In Munich and the metropolitan area, we develop IT projects in various sectors, technologies and roles with around 280 employees. We are constantly looking for experienced specialists and graduates with a proven academic record who wish to join us.
Transportation

Monday, 29 May

07:30  Departure coach from Freising, main train station, Bahnhofsplatz
08:00  Departure coach from Garching, Boltzmannstr. 17
08:00  Departure two coaches from Munich, Arcisstr. 21/ TUM main entrance
21:00  Hotel shuttle from TUM Science and Study Center

Tuesday, 30 May

08:30  Hotel shuttle to TUM Science and Study Center
22:30  Hotel shuttle from TUM Science and Study Center
23:30  Hotel shuttle from TUM Science and Study Center
00:30  Hotel shuttle from TUM Science and Study Center

Wednesday, 31 May

08:45  Hotel shuttle to TUM Science and Study Center
14:30  Departure coaches to Munich, Garching, Freising
City map of Burghausen

The black arrow on the left indicates the direction to the TUM Science and Study Center.
IGSSE Team

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Director

Dr. Ing. Michael Klimke
Managing Director

Dr. rer. nat. Marco Barden
Project Manager

Jo-Anna Küster, M.A.
Project Manager

Mirely Kollmannsberger, M.Sc.
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Credit: Icon page 13 from flaticon.com; picture page 3: Andreas Heddergott; picture page 18: Astrid Eckert