Graduate Academy SimTech

Johannes Kästner,
Head of GS SimTech
Agenda

1. About us.
2. Concept and regulations.
3. Questions.
About us

Head and Coordination

Prof. Dr. Johannes Kästner
Head of GS SimTech

Katharina Fuchs
Coordinator GS SimTech

Almut Meyer zu Schwabedissen
Equality and diversity manager
About us

Coordination

• Coordination of your PhD “life cycle”
  • Process steps (advise during your registration as doctoral student, Milestone Presentation, Stay Abroad, Training Program, Submission of thesis and oral exam)

• Communication via
  • Confluence
  • GS-Simtech@ (Email distribution list)
  • Email: Graduiertenschule@simtech.uni-stuttgart.de / katharina.fuchs@simtech.uni-stuttgart.de
  • Office hours: Mon, Tue

(Short Reminder: Poster Session and Booklet
Poster Session: https://www.surveymonkey.de/r/postersessionbadboll
Booklet: events@simtech.uni-stuttgart.de until 27 May)
About us

Equality and diversity manager

- Early Career Counselling
- Recruiting and Onboarding Processes
- Internationalisation
- Administrative Cooperation (University, IntCDC, MPI)

Almut Meyer zu Schwabedissen

Equality and diversity manager
Early Career Management
About us: Development of GS SimTech

• In total: about 161 PhD students

• Almost all PhD students are employees of Univ. of Stuttgart under an E13 contract.

• You have several roles:
  • Employee
  • (SimTech financed researcher)
  • PhD student

Here, we only talk about your role as PhD student in the GS SimTech.
Basic Understanding: Difference Between SC & EXC

- Stuttgart Center of Simulation Science (SC) faculty-like center acts as “container” for EXCs.
- EXC 2075 member assembly and directors decide on all scientific and budgetary matters.
- SC decides on academic matters (PhD, habilitation, professorships, study program).
- Alignment of EXC and university governance, but roles and responsibilities are strictly different.

- SC SimTech has the same role(s) as a faculty
- PNs are the entities in which EXC research is performed
GS SimTech: Overview of Educational Concept

1st phase of education
- subject specific courses (6-12 ECTS)
- Key Qualifications (1 course)
- 1 GS unit
- Status Seminars

12-18 months

2nd phase of education
- 2 GS units
- Stay abroad
- Status Seminars

in total 5 (7) years maximum
GS SimTech: Admission to the GS

- **Application** for admission at GRADUS.

- In most cases jointly with a “classical” Fakultät (faculty).

- Your **co-advisor** supports you in your interdisciplinary network and accompanies you until your MSP. S/he serves as second examiner in your MSP.

The co-advisor needs to be identified and reported to GS SimTech.

- Every PhD student is assigned to one **project network (PN)**.

- “**Promotionsvereinbarung**” (agreement on doctoral studies).
GS SimTech: Advisor Concept

• Supervision by at least two advisors of SimTech

• Role of co-advisor is individual. Generally, supporting an interdisciplinary view and network in SimTech. He/she mainly advises you on the Milestone Presentation, but will usually not provide a report on your work.

• Please choose lectures and GS seminars, time and place of your stay abroad, etc. in agreement with your main advisor.

• The main advisor confirms the compliance with GS regulations twice:
  • before your milestone presentation and
  • with the initiation of the doctoral examination procedure.
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Acceptance at GS SimTech
Acceptance as doctoral candidate
## Glossary of GS SimTech Training Program

Please note: the Doctoral Degree Regulations require at least 9 credit points

<table>
<thead>
<tr>
<th>Subject-specific courses</th>
<th>What does this entail?</th>
<th>Who decides?</th>
<th>Number of Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>regular courses offered by the Uni Stuttgart (or from suitable courses outside the University of Stuttgart); Ideally completed before MSP</td>
<td>advisor and doctoral student specified in the doctoral supervision agreement</td>
<td>At least 6 CP</td>
<td></td>
</tr>
</tbody>
</table>

| Key qualifications | To acquire interdisciplinary qualifications | Doctoral student (and advisor) | At least 1 course (3 CP) |
### Graduate School Units

(to promote interdisciplinary networking, to expand scientific horizon)

<table>
<thead>
<tr>
<th>What does this entail?</th>
<th>Who decides?</th>
<th>Number of Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) GS SimTech seminar</td>
<td>Doctoral student</td>
<td>3 offers in total</td>
</tr>
<tr>
<td>b) career counseling, mentoring schemes as well as industry connections (“Academy Program” of GS SimTech)</td>
<td></td>
<td>- At least 1 GS Seminar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- at least one prior to MSP</td>
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<tr>
<td></td>
<td></td>
<td>Usually no credit points assigned</td>
</tr>
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</table>

### Presentation of research results

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>annual poster presentation, possibly accompanied by a lecture, during the annual doctoral seminars (which may take place as part of the annual status seminar of SC SimTech)</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
Graduate School Units
for example summer term 2022

GS Seminar:
• Novel methods in simulation science, Paul Bürkner, Kristyna Pluhackova, Benjamin Unger
  Thursdays, 3:45 pm to 5:15 pm in V 7.04.

Further Courses:
• July 4-6, 2022, Status Seminar Bad Boll (Participation is obligatory. Presentation of own PhD project).
• July 11-15, 2022, Summer School (can count as GS unit).
• August 5-7, 2022: SimTech-Weekend-Retreat 2022 (can count as GS unit).
• Coursera (featured online courses, further information will be announced soon).

Further possibilities outside of mandatory program:
Language Courses: German language course offerings, tailored to your individual needs.
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for example summer term 2022

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SimTech Colloquium

(bi-weekly or so …)

• Participation is strongly encouraged!

• The latest program will be sent out via e-mail.

• You can also find the dates and topics if you check the SimTech Website as well as the calendar entries on Confluence.

• Summer term 2022 (4 pm in V7.01):
  • 11 May Dieter Schmalstieg → 13 July
  • 18 May Christian Matthias Schlepütz
  • 22 June Tobias Pfaff (online)
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Acceptance at GS SimTech

Acceptance as doctoral candidate

Milestone Presentation
GS SimTech: Milestone and 2nd Phase of Educational Program

Milestone Presentation (12–18 months after the beginning of your PhD):

• **Compliance** with GS regulations must be sent to the GS coordination.

• Send Milestone Report (about 10 pages) to GS and both advisors.

• **Public talk** (30 min) + non-public oral exam/discussion (~60 min) with both advisors.

• Send protocol with the result to the GS coordination.

2nd phase of Education Program:

• Additional 2 GS units.

• Participation in the annual doctoral seminar/status seminar.

• **Stay abroad** (up to 3 months):
  • Time and place in agreement with your advisor.
  • Some travel funding available from EXC SimTech (currently fully funded for every GS SimTech student).
GS SimTech: Overview of Educational Concept

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Acceptance as doctoral candidate

12-18 months

2nd phase of education

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Milestone Presentation

Acceptance at GS SimTech
GS SimTech: Doctoral Examination Procedure

- **Admission** to the examination via the faculty.
- Cumulative dissertation is possible (rules of the participating faculty apply).
- At least one **external examiner** (outside of University of Stuttgart)!
  Compliance with GS regulations must be sent to the GS coordination.
  Submission of the thesis to GS and the faculty.
- **Oral exam** + talk of 30 minutes before your exam (open to all employees and students of the University of Stuttgart).
- Doctoral certificate.
  You graduate in SimTech with participation of faculty xx.
GS SimTech: Information

• Too much information?
• Don’t worry. You can always contact us.
• Via e-mail: graduiertenschule@simtech.uni-stuttgart.de
• Or call us directly:
  • Katharina Fuchs: 0711 685 60115
  • Almut Meyer zu Schwabedissen: 0711 685 60104

• And if you wish to read up on this in your own time, you will find all the information and forms on our internal SimTech webpage in confluence (https://wisman.izus.uni-stuttgart.de/display/SimTechGS/GS-SimTech+-+english)
Still Lost?

- Here are some more resources you can tap into:

  Ask your advisor(s)
  Ask the fellow GS SimTech PhD students in your group
  Ask the fellow PhD students in your PN
  Ask the SimTech Doctoral Spokespersons
  Ask the GS Coordination
  Ask the head of the GS SimTech
Reviving a Tradition: SimTech-Weekend-Retreat

Retrospect: has taken place each year before Covid-19 eligible as GS Seminar / GS unit

August 5th – 7th 2022

Internationales Forum Burg Liebenzell
At the End …

… we ask you to:

• Please inform us in time about any changes or activities (e.g. milestone presentations)!
• Think about further GS activities. Ideas/input is very encouraged!

• If you have any questions – please feel free to ask!

• Katharina Fuchs / Almut Meyer zu Schwabedissen / Johannes Kästner:
  graduiertenschule@simtech.uni-stuttgart.de, Tel: 0711 / 685-60115 (Katharina)
Thank you!

Do you have any questions? Please do not hesitate to ask.

If you have ideas to share, we appreciate your input!
Some Terms and Abbreviations

- **Confluence**: Our SimTech-internal website:  
  https://wisman.izus.uni-stuttgart.de/display/SimTech/SimTech+Startseite

- **DaRUS**: the Data Repository of the University of Stuttgart:  
  where your research data should be deposited and published.
  → Information offers are in the planning

- **PUMA**: (“Akademisches Publikationsmanagement”) management tool for scientific publications and bookmarks  
  https://wisman.izus.uni-stuttgart.de/display/SimTech/Publication+notification+workflow+for+SimTech
SimTech Project Networks (PNs)

• PN 1: Data-Integrated Models and Methods for Multiphase Fluid Dynamics
• PN 2: In Silico Models of Coupled Biological Systems
• PN 3: Data-Integrated Model Reduction for Particles and Continua
• PN 4: Data-Integrated Control System Design with Guarantees
• PN 5: On-the-fly Model Modification, Error Control, and Simulation Adaptivity
• PN 6: Machine Learning for Simulation
• PN 7: Adaptive Simulation and Interaction
• PN 8: Accelerating Simulation by Quantum Computing