

The **Information Systems Group** designs systems that **extract, process, and act** on information using tools from optimization, signal processing, control, learning, and probability (not always all of them, not necessarily all at once). We are currently offering a

### **PhD STUDENT POSITION** **(m/f/d, 100%, E13 TV-L)**

The University of Stuttgart represents outstanding, world-renowned research and first-class teaching in one of Europe's most dynamic industrial regions. As a reliable employer, the university supports and promotes the academic careers of its researchers. It is proud of its employees, who currently come from over 100 different countries. The university is a partner for knowledge and technology transfer and focuses on multidisciplinary.

The Cluster of Excellence "Data-Integrated Simulation Science" (EXC 2075) is an interdisciplinary research center with more than 200 scientists of different ages, gender identities, nationalities and different subject areas, jointly performing research towards a common goal: We target a new class of modeling and computational methods based on available data from various sources, in order to take the usability, precision and reliability of simulations to a new level.

The Information Systems Group is led by:

#### **Luiz F. O. Chamon**

ELLIS–SimTech independent research group leader

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#### **The position**

PhD students of the Information System Group work on topics at the intersection of optimization, learning, and statistics. Example projects include, but are certainly not limited to,

- Science-constrained learning
- Resilience in learning and control
- Ascent-descent dynamics in optimization and sampling

Projects in the group are typically at the interface of theory and practice, so there is room for those more mathematically-inclined as well as those more empirically-inclined. While all PhD students are expected to know and do a bit of both, there are opportunities for you to position yourself along a wide range of the theory/math–practice/coding spectrum.

**Deadline:** None, applications will be accepted on a rolling basis

**Starting date:** Spring 2023 (flexible)

#### **Requirements**

Consider applying if you

- have obtained or will soon obtain a master degree in electrical engineering, computer science, or a related field (applied math, operations research, etc.)
- have *demonstrated* reading, writing, and oral proficiency in technical English (*the official and working language of the group is English*)

- have experience with at least one of the usual suspects: Python, MATLAB, Julia, Python, R (*I'm not a Python fanboy and you don't have to be a master programmer, but the official programming language of the group is Python*)
- are familiar with at least one "deep learning" (autodiff) framework, e.g., PyTorch, Tensorflow, PyTorch, Jax, PyTorch (*again, not a fanboy, but the coin flip did land on PyTorch so...*)

If in addition you

- are creative and able to come up with fresh solutions to technical challenges;
- are collaborative and appreciate working with peers and junior (undergraduate) students;
- enjoy presenting and discussing your work to academic and non-academic audiences; and
- are motivated to do high-level research in a demanding, but supportive environment,

then you should not only consider, but make sure you apply!

### How to apply

Interested candidate should submit their applications to [luiz.chamon@simtech.uni-stuttgart.de](mailto:luiz.chamon@simtech.uni-stuttgart.de) starting the subject line with [App PhD] and including:

- Motivation letter describing background and research interests (1-2 pages)  
*Your letter must outline your prior work and the kind of research you are excited to conduct in the future. Make sure to relate your interests and goals to the publications and research topics of the group. Also, point to papers, reports, personal projects, anything that showcases your writing, mathematical, and/or coding proficiency.*
- CV (including a list of publications and research/coding projects, if you have any)
- Full transcripts of completed academic degrees
- Name and contact of (up to three) references

Prior to applying, candidates are expected to review the requirements and my [recent publications](#).

If you have any questions regarding this positions, the PhD in general, the University of Stuttgart, and/or life in Germany, do not hesitate to reach out at [luiz.chamon@simtech.uni-stuttgart.de](mailto:luiz.chamon@simtech.uni-stuttgart.de).

We cannot reimburse any costs arising from the performance of job interviews.

At the University of Stuttgart and the Cluster of Excellence EXC 2075, we actively promote diversity among our employees. We have set ourselves the goal of recruiting more women scientists and employing more people with an international background, as well as people with disabilities. We are therefore particularly pleased to receive applications from such people. Regardless, we welcome any good application.

Women who apply will be given preferential consideration in areas in which they are underrepresented, provided they have the same aptitude, qualifications and professional performance. Severely disabled applicants with equal qualifications will be given priority.

As a certified family-friendly university, we support the compatibility of work and family, and of professional and private life in general, through various flexible modules. We have an employee health management system that has won several awards and offers our employees a wide range of continuing education programs. We are consistently improving our accessibility. Our Welcome Center helps international scientists get started in Stuttgart.

Information in accordance with Article 13 DS-GVO on the processing of applicant data can be found at [https://careers.uni-stuttgart.de/content/privacy-policy/?locale=en\\_US](https://careers.uni-stuttgart.de/content/privacy-policy/?locale=en_US)