



University of Stuttgart  
Germany



Institut für  
Maschinelle  
Sprachverarbeitung

**WELCOME**  
to the program  
**Master of Science**  
*Computational Linguistics*

Stefanie Anstein  
October 2024



# Overview

1 Introduction – who we are ...

2 Details on the M.Sc. CL

3 Further useful information

4 Next steps

# Introduction – who we are ...

1

# IMS chairs / departments / research clusters

- **Prof. Sebastian Padó & his group:**



computational semantics / (word) meaning, multilinguality, text mining, social media analysis, computational social science, discourse studies & much more

- **Prof. Jonas Kuhn, Prof. Schulte i.W. & more:**



structural processing / syntax, text studies, semantic relations, computational social science, digital humanities, research infrastructure & much more

- **Prof. Thang Vu, Dr. Schweitzer, Dr. Wokurek & more:**



digital phonetics, speech recognition/synthesis, spoken language understanding, dialogue systems, deep learning & much more

- **Jun.-Prof. Carina Silberer & her group:**



semantic models via machine learning, language and vision, grounding, multimodality, computational semantics & much more

# More IMS research groups and associated teams

- **Research Group SemRel** 'Semantic Relatedness between word meanings':  
**Prof. Dr. Sabine Schulte im Walde**
- **Junior Research Group CiK** 'Detection of meaning change, probabilistic modeling of word meaning':  
**Dr. Dominik Schlechtweg**
- **Junior professorship** 'Psycholinguistics and Cognitive Modeling':  
**Jun.-Prof. Dr. Titus von der Malsburg**
  - human sentence comprehension
  - experimental research using eye-tracking, large-scale crowdsourcing, electric brain potentials etc.
  - computational cognitive modeling
- **SimTech Tenure-Track Professorship** 'Computational Cognitive Science':  
**Jun.-Prof. Dr. Benedikt Ehinger**
  - visual cognitive science
  - behavioral, EEG and eye-tracking experiments
  - statistical modelling
- ... and many more, see our webpage

# Student representatives MSV / CL



# Special Service of our Faculty

## International Service Point Faculty 5



Complementary to the services of the university's International Office:

- Support and contact point for the faculty's international students
- Promoting further internationalization at Faculty 5
- Events & networking activities for and with international students



### Stay informed!

- [ISP Website](#)
- [Monthly mailing - Faculty 5](#)
- Follow [Meta](#) & [Laura](#) on LinkedIn

### Meta Geisbüsch, LL.M. & Laura Busch, M.A.

International Service Point (ISP) | Faculty 5  
University of Stuttgart  
Pfaffenwaldring 47 | Room 4.270  
[internationalstudents@f05.uni-stuttgart.de](mailto:internationalstudents@f05.uni-stuttgart.de)

## Upcoming events for international students of Faculty 5

### International Days at Faculty 5:

- Going Abroad Session | Nov 11
- International Study Fair | Nov 12
- Indian Night | Nov 14
- Partner Universities Online Sessions | Nov 19 & Nov 21

**Career Workshop** "Fit for the German job market: How to find jobs and apply successfully" | Nov 20

**Semester Opening Faculty 5** | Nov 28

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**Welcome Days** at the university's **International Office**  
(IZ): October 9 & 10





## Our monthly mailing!

Stay up to date on **important information and events for international students of our faculty!**

Sign up!



# Details on the M.Sc. CL

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# Program of study

- regular duration: 4 semesters (max. duration: 9 sem.)
- consists of several **modules**
  - module duration: 1-2 semesters
  - can contain 1 (or more) **course(s)**  
(= lectures, seminars, lab sessions ...)
- module descriptions: module handbook (PDF; via book icon in C@MPUS – “My Study Program”)
- ECTS credit point (CP) = *Leistungspunkt* (LP)
  - measurement of working load (1 CP = 30h) & weight for the calculation of the final M.Sc. grade
  - 2 SWS/SH/SSSt = 1,5h/week = usually 3 CP/semester  
(there are exceptions, e.g. the “Project Seminar CL” or modules from the linguistics department)
  - 120 CP needed for M.Sc. degree;  
30 CP per semester = 20 SWS = 10 x 1,5h per week
  - are given for complete modules

# Study plan suggestion (flexible!)

recommendation for all students starting in winter term				
Semester	Obligatory modules	Elective* modules	Other	ECTS Credit Points (CP)
1 (WiSe)	<b>Methods in CL**</b> [8SWS*** 12CP]	<b>Elective courses</b> worth ca. 9CP		30
	<b>Intro to DL for STP**</b> [6SWS 9CP]			
2 (SuSe)	<b>CL Team Lab°</b> [4SWS 6CP]	<b>Elective courses</b> worth ca. 21CP	<b>Key competences°°</b> [2SWS 3CP]	30
3 (WiSe)	<b>CL Research Module**</b> [4SWS 9CP]	<b>Elective courses</b> worth ca. 21CP		30
4 (SuSe)	<b>Master's thesis</b> [30CP]			30
Color key:	IMS	IMS & Computer Science / Linguistics Departments	across UniS	

\*) choose 1 of 3 subcatalogs from Electives/CompLing/ as primary catalog with min. 18 CP, the other 2 with min. 6 CP each

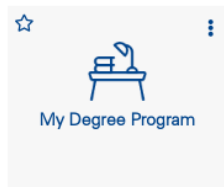
\*\*\*) offered in winter semesters

\*\*\*) 2 SWS/SH = 1,5h/week

°) offered in summer semesters

°°) also possible in semesters 3 or 4

# Terminology: catalogs vs. modules vs. courses



☐ [976-2017] Computational Linguistics

☐ ▲ [100] Compulsory modules

☐ ▲ [300] Elective Modules

☐ ▲ [310] Computational Linguistics

☐ ▲ [3101] Core Computational Linguistics

☐ M [13270] Parsing

☐ M [35210] Topics in Computational Semantics

☐ M [35280] Grammar Formalisms and Grammar Engineering

☐ P [35281] Grammar Formalisms and Grammar Engineering

☐ P [35282] Vorleistung

☐ LV [352801] Seminar course Grammar Formalisms and Grammar Eng

# Catalogs vs. modules vs. courses

- [-] [976-2017] Computational Linguistics
- [+] ▲ [100] Compulsory modules
- [-] ▲ [300] Elective Modules
  - [+] ▲ [110] Computational Linguistics
    - [-] ▲ [3101] Core Computational Linguistics
      - [+] M [13270] Parsing
      - [+] M [35210] Topics in Computational Semantics
      - [-] M [35280] Grammar Formalisms and Grammar Engineering
        - [+] P [35281] Grammar Formalisms and Grammar Engineering
        - P [35282] Vorleistung
      - [-] LV [352801] Seminar course Grammar Formalisms and Grammar Eng

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Lehrveranstaltungen im Studienjahr ◀ 2021/22 ▶

401317000 21W 4SSt VU H: Syntax

403528000 21W 4SSt VU H: Grammar Formalisms and Grammar Eng

# Catalogs vs. modules vs. courses

- [-] [976-2017] Computational Linguistics
- [+] ▲ [100] Compulsory modules
- [-] ▲ [300] Elective Modules
  - [+] ▲ [110] Computational Linguistics
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      - [+] M [13270] Parsing
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      - [+] P [35281] Grammar Formalisms and Grammar Engineering
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# Catalogs vs. modules vs. courses

- [-] [976-2017] Computational Linguistics
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- [-] ▲ [300] Elective Modules
- [+] ▲ [10] Computational Linguistics
- [-] ▲ [3101] Core Computational Linguistics
- [+] M [13270] Parsing
- [+] M [35210] Topics in Computational Semantics
- [+] M [35280] Grammar Formalisms and Grammar Engineering
- [+] P [35281] Grammar Formalisms and Grammar Engineering
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Lehrveranstaltungen im Studienjahr 2021/22

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403528000 21W 4SSt VU H: Grammar Formalisms and Grammar Eng



# Program of study ctd.

Details about compulsory modules

- “Methods in Computational Linguistics”  
(12 credit points; winter semester; highest priority!)
  - option for MSV/CL graduates (only the ones who got my notification email): choose 2 advanced courses instead, see current list on
    - Repository > Engineering > Maschinelle Sprachverarbeitung / Computational Linguistics > Arbeitsgruppen > Studying @ IMS > [For NLP graduates only] List of advanced courses to replace MethodsCL with
- “Introduction to Deep Learning for Speech and Text Processing”  
(9 credit points; winter semester)
- “Computational Linguistics Team Laboratory”  
(6 credit points; summer semester)

# Program of study ctd.

Elective modules (51 credit points)

- choose 1 primary sub-catalog (at least 18 credit points) and 2 secondary catalogs (at least 6 credit points each) from the “Computational Linguistics” catalog (max. 12 credit points from Linguistics)
- choose primary/secondary catalogs from
  - Core Computational Linguistics
  - Applied Natural Language Processing
  - Speech Processing
- the remaining modules (21 credit points) can be chosen freely from all offered catalogs (largest choice and our recommendation: make use of the Computer Science offers!)

# Program of study ctd.

Elective modules (60 credit points)

- if a module is not (yet) listed in our module handbook, ask S. Anstein if it can be imported (12 CP from Bachelor programs possible)
- special module: “Project Seminar Computational Linguistics” (2 SWS → 6 CP by doing additional project on top of an IMS seminar)
- special module: “Optional R&D Practical Project for CL” (6 CP for external internship)
- special module: “Optional Research Project CL” (12 CP for independent research project)
- Erasmus CPs can also be used as electives

**Please note:** Each course can be used only once – to prove this and to help us entering your grades, you’ll need to submit your course-module mapping each semester (see email reminder). You can find the possible mappings in C@MPUS (via “Course catalog” – “Status within Curriculum”).

# Important: course-module mapping



(Project Seminar CL)

## Combination modules: choose 2 courses from list



☐ **M** [73330] Topics in Natural Language Processing ⌚ 📅

☐ **P** [73331] Topics in Natural Language Processing ⌚ 📅

☐ **LV** [733301] Topics in Natural Language Processing, lecture ⌚ 📅

Lectures in academic year	🔊 2022/23 🔊	Part
403160510	22W 2SH S Knowledge Base Population in Practice	⊗
403529010	22W 2SH S Evidence-based Automatic Fact-Checking	⊗
403000040	23S 2SH S Argument Mining	➔
403513500	23S 2SH S Language Technology for Diversity & Inclusion	➔
403528002	23S 2SH LE Multimodal Semantics	➔
403848900	23S 2SH S Model projection	➔
406351600	23S 2SH S Multilinguality and linguistic typology in NLP	➔

# Project seminar CL: extend a 3-CP course to 6 CP



LV [724301] Project Seminar Computational Linguistics

Lectures in academic year	2022/23	Part
403539000 22W 2SH L Experimental Phonetics		✗
171235450 23S 2SH AS Acquisition and analysis of eye-tracking data (SoSe 2023)		+
401516000 23S 2SH L Ethics and NLP		+
401516003 23S 2SH S Formal and Computational Approaches to Narrative		+
403513500 23S 2SH S Language Technology for Diversity & Inclusion		+
403513501 23S 2SH S The psycholinguistics of neural language models		+

# Program of study ctd.

Key competences (3 credit points)

- modules for general competences (“Schlüsselqualifikation” = SQ)
  - e. g. presentation modalities, time / project / knowledge management, ...
  - can be done in any semester; only online registration possible before semester start: <http://www.uni-stuttgart.de/sq>
  - can be found in C@MPUS at “Central facilities – Central Facility Zentrum für Lehre und Weiterbildung der Universität Stuttgart – Central office Fachübergreifende Schlüsselqualifikationen – Courses”
  - possible at the Language Center: advanced language courses
  - Language Center also offers SQ courses during semester breaks
  - You'll get an email with the registration dates!

# Program of study ctd.

## Later obligatory modules

- Research module (9 credit points)
  - Research seminar
    - preparing Master's thesis: reading research papers, possibly finding topic for your thesis; grade: writing proposal & presenting thesis & passing oral exam
    - can be taken "remotely" (studying abroad, internship)
- Master's thesis (30 credit points)
  - needed to start with Master's thesis:
    - at least 60 credit points
    - passed requirements exam(s), if applicable
    - passed MethodsCL module

**Please note:** This is an idealised scheme of the program – you can do it differently, just don't exceed the maximum duration of 9 semesters! For students who start in summer term, an individual plan can be developed together with S. Anstein (according to your background).



**Further useful information**

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# Useful information

- German language course / “tandem” advisable
  - binding version of University documents: in German
  - to make the most of your life in Germany :)
  - check C@MPUS > Central Facilities > Language Center > German > Section I: German as a Foreign Language: Interdisciplinary Key Qualifications (FSQ) > German as a Foreign Language: Special offer for study programs
- some students got an “admission with requirements” (*Auflagen*)
  - see C@MPUS account; recommended to take the programming course asap (no credits, but needs to be passed before registering your thesis)
- please participate in evaluations
  - course evaluations, carried out during semester
  - module evaluations, carried out after end of semester/exams (by email)

# Useful information ctd.

- exam regulations (binding version: German; indicative translation  
see <https://www.student.uni-stuttgart.de/en/study-programs/Computational-Linguistics-M.Sc./?page=examinations>)
  - important information is also available in English on the websites and on the handout (if in doubt, please ask!)
  - describe obligatory modules & define electives
  - determine number of possible repetitions and maximum length of the study, extensions and exceptions etc. (for academic accommodations due to special circumstances see also <https://www.student.uni-stuttgart.de/en/organizing-studies/disability>)
- exams
  - oral or written exam (during the semester or at the end of the semester)
  - ungraded exam: passed / failed
  - graded exam:  
1,0 (excellent) / 1,3 / 1,7 ...– 4,0 (acceptable)
  - hint: there might be some preconditions to fulfill in order to be allowed to take part in an exam, e.g. exercises etc.

# Useful information ctd.

- registration for exams / **modules**
  - exact exam dates are announced in the lectures (can also take place in lecture-free period!)
  - register online in C@MPUS
  - each exam has to be registered during the registration period (as announced by the University: May/June & November/December) – otherwise participation is not possible (screenshot of registrations recommended)

# Useful information ctd.

- postponing / repeating exams
  - you can only repeat exams you have failed
  - you can withdraw from an exam until 7 days before the exam takes place (otherwise, a medical certificate is needed as soon as possible in order for the exam not to count as “failed”)
  - failed exams can be repeated once; this has to be done within 2 semesters; re-registration necessary!
  - 2 failed modules can be dropped
  - a second repetition of a module exam (type “PL” and “LBP”, see module handbook) is only allowed in 3 cases in total

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15. Lehrveranstaltungen und -formen:	• 723801 Lectures with exercises Methods in Computational Linguistics
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16. Abschätzung Arbeitsaufwand:	lecture and exercises
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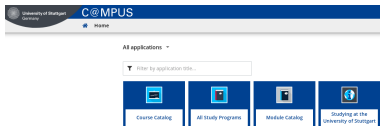
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17. Prüfungsnummer/n und -name:	• 72381 Methods in Computational Linguistics (PL), , Gewichtung: 1 • V Vorleistung (USL-V), • Methods in Computational Linguistics, Prüfungsleistung (PL), Schriftlich oder Mündlich, Gewichtung: 1
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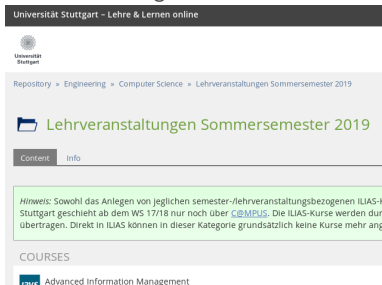
# Useful information ctd.

- C@MPUS online portal
  - contains all currently offered courses (+ descriptions) and the modules (+ descriptions) they can be used for
  - personal timetable can be created (by registering for courses after online enrollment: non-binding)
  - (de-)registration for exams (binding)
  - document downloads: transcript, enrollment certificate
  - <https://campus.uni-stuttgart.de>



# Useful information ctd.

- ILIAS platform
  - is used to share information (slides, literature, ...) for courses (provided by the lecturers)
  - when you register the course in C@MPUS you will automatically be in the corresponding ILIAS course (if there is one for this course)
  - please also join the group “Studying @ IMS” for various useful information (including forum “Ask me anything”): path:  
Repository – Engineering – Maschinelle Sprachverarbeitung / Computational Linguistics – Arbeitsgruppen – Studying @ IMS
  - <http://ilias3.uni-stuttgart.de>



# Useful information ctd.

- more important information on the IMS website  
<http://www.ims.uni-stuttgart.de>
  - student FAQs
  - lecturers / staff contact data
  - projects & publications
  - events & news
  - ...
- more space in (computer) working areas in Pfaffenwaldring 5c and in Universitätsstraße 38
- honor code: not to plagiarize (worst case: plagiarism can lead to exmatriculation)
- please read the IMS code of conduct:  
[www.msv-cl.de/code-of-conduct](http://www.msv-cl.de/code-of-conduct)
- open learning space for maths and computer science questions:  
[www.mint.uni-stuttgart.de/angebote/offener-lernraum](http://www.mint.uni-stuttgart.de/angebote/offener-lernraum)
- “Makerspace” on campus Vaihingen for conducting individual projects: <https://uni-stuttgart.de/maked-digital>



# Useful information ctd.

Further institutions at the university to get information & help:

- International Service Point of faculty 5 for general questions (complementary to the services of the university's IZ/IO:)
  - [www.f05.uni-stuttgart.de/studium/international-service-point](http://www.f05.uni-stuttgart.de/studium/international-service-point)
- Examination Office (*Prüfungsamt*) & Admissions Office (*Studiensekretariat*)
  - Pfaffenwaldring 5c; [www.uni-stuttgart.de/en/study/contact](http://www.uni-stuttgart.de/en/study/contact)
- International Office (*Internationales Zentrum*), PWR 60
  - welcome service
  - international (peer) mentoring, learning groups, psycho-social counselling, student associations, leisure activities, help with German forms etc.
  - [www.uni-stuttgart.de/en/university/international/service](http://www.uni-stuttgart.de/en/university/international/service)
- Service point “uni & family”, e.g. for maternity protection
  - [www.uni-stuttgart.de/en/study/counseling/children](http://www.uni-stuttgart.de/en/study/counseling/children)

# Useful information ctd.

Further institutions at the university to get information & help:

- Student Services (*Studierendenwerk*)
  - housing (make sure you stay on waiting list!), childcare, legal advice, social advice, psychological support, finances, disabilities, ...
- “Ombudsperson”: a neutral and confidential contact person for people in need of support in university conflicts:  
[www.student.uni-stuttgart.de/en/counseling/ombudsperson](http://www.student.uni-stuttgart.de/en/counseling/ombudsperson)
- Student Counseling Center (*Zentrale Studienberatung*), PWR 5c
  - general and specific questions, e.g. disabilities, chronic illness
  - contact point for all unclear issues
  - courses on studying efficiently etc., see [www.student.uni-stuttgart.de/en/counseling/zsb/learning-counseling/](http://www.student.uni-stuttgart.de/en/counseling/zsb/learning-counseling/)



Universität Stuttgart  
Zentrale Studienberatung(ZSB)

## Learning Counseling in the Student Counseling Center

### Tips and advice for successful learning

- Learning skills newsletter in the winter semester
- Counseling for individual students and learning groups
- Workshops:
  - *Learning methods and exam preparation*
  - *Learning regularly, avoiding procrastination*



**Contact for appointment & newsletter subscription:**  
[lernberatung@uni-stuttgart.de](mailto:lernberatung@uni-stuttgart.de)

# Useful information ctd.

Further institutions outside the university to get information & help:

- Welcome Center Stuttgart  
(<https://welcome.stuttgart.de/welcomecenter/en/>)
  - help in many areas for new students: Welcome Club, Job Centre etc.
- Nightline Tübingen: an anonymous, confidential, unprejudiced and independent evening hotline (also available in English):  
<https://nightline-tuebingen.de/>
- German job centre 'Agentur für Arbeit':  
<https://www.arbeitsagentur.de/en/welcome> (student job board etc.)

**Next steps**

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# For you to do ...

- take a look at
  - the current course offerings for CL in C@MPUS
  - in the curriculum tree view, click on the calendar icons to see all current courses in that catalog
    - choose around 30 CP / 20 SWS / 10 slots (check course combinations for modules)
    - hint for non-CL graduates: rather choose „lectures“ and overview / introductory courses in the beginning and „seminars“ on very specific topics only in the later course of studies (courses show specific prerequisites in C@MPUS; default: basic CL skills)
    - if you plan to focus on machine learning, work on your maths ...

# Finding your courses via C@MPUS:

University of Stuttgart Germany C@MPUS Home

Favourites

3. 1.

Calendar My Examination Dates My Achievements My Degree Programme My Courses C@MPUS Documentation

[979-2013] Computer Science [100] Study Profiles [110] Visual Computing [111] Compulsory [46760] Theoretical and Methodological Foundations of Visual Computing [46761] Theoretical and Methodological Foundations of Visual Computing [46762] Vorleistung [467601] Vorlesung Theoretische und Methodische Grundlagen des Visual Computing

schedule

2.

Lectures in academic year	Part	Lecturer	Status	Place (1st session)	Time (1st session)
2019/20	Part	(Assistant)			
020961000 19W 3SH L Theoretical and		Weiskopf	BF	Universität	14.10.19

Stefanie Anstein: intro M.Sc. CL

# Dates to save ...

- binding module exam registration period: Nov 13 - Dec 4
- lecture breaks and public holidays (shops etc. closed!): see <https://www.uni-stuttgart.de/en/study/application/academic-calendar>



# Communication & more ...

We rely on you **reading all your emails!**

- st12345@stud.uni-stutt... address  
<https://www.tik.uni-stuttgart.de/en/services-a-z/e-mail-00002>
- ILIAS email account (forwarding possible)
- all enrolled students will get an **IMS user account**
  - linux tutorial see <https://www.ims.uni-stuttgart.de/documents/team/schweitz/docs/linux.tutorial.pdf>
  - including an email account: `firstname.lastname@ims.uni-stuttgart.de`
  - you'll get an info e-mail to st address (default forwarding to st address)

**In general, you're expected to take full responsibility and be pro-active!**

Please also be aware that German authorities don't make exceptions – we expect everyone to accept that “no” means “no”.

# In case of any questions ... (1/3)

... please ask:

- **Stefanie Anstein**

degree program manager, student advisor &  
contact person examination committee

- office: 01.006 in Pfaffenwaldring 5b
- [stefanie.anstein@ims.uni-stuttgart.de](mailto:stefanie.anstein@ims.uni-stuttgart.de)
- +49 (0)711 68581387
- [www.ims.uni-stuttgart.de/institut/team/Anstein-00002](http://www.ims.uni-stuttgart.de/institut/team/Anstein-00002)
- IMS FAQ page: [www.ims.uni-stuttgart.de/en/teaching](http://www.ims.uni-stuttgart.de/en/teaching)

**If in doubt, please ask – the sooner the better ... :)**

(... and please use cc instead of single e-mails  
whenever you contact several persons, thanks.)

By the way, we're always grateful for feedback about  
how we could improve our services (websites, advising etc.)!

## In case of any questions ... (2/3)

... please ask:

- the coordinators of the International Service Point (ISP) of faculty 5 **Meta & Laura**:
- contact
  - [internationalstudents@f05.uni-stuttgart.de](mailto:internationalstudents@f05.uni-stuttgart.de)
  - +49 (0)711 68567926 (Meta) / +49 (0)711 685 67277 (Laura)
  - in person during their office hours in Pfaffenwaldring 47, Room 4.270 or online (on appointment)

# In case of any questions ... (3/3)

... please ask:

- our student representatives (room 00.015; fscl@listserv.uni-stuttgart.de; msv-cl.de – facebook group, discord server, messenger groups)

## And now ...

- “Follow us” on our little virtual guided tour – see the student representatives’ room and take a look into the computer lab!  
<https://youtu.be/W-jEeIyjrUE>
- Ask questions, if there are any ...

Welcome at the IMS!