UNIVERSITÄT PASSAU

Welcome Meeting for Master‘s Students

Faculty of Computer Science and Mathematics

Monday, 20 April 2020

Introduction

- Prof. Dr. Michael Granitzer, Dean
- Prof. Dr. Tobias Kaiser, Vice Dean
- Prof. Dr. Matthias Brandl, Dean of Studies

- Dr. Robert Offinger, Faculty Manager
- Wolfgang Mages, International Coordinator
- Luise Haack, iStudi Coach
- Fachschaft Informatik Student Committee

Agenda

- Registration and Enrolment Status
- German Language Skills
- Study and Examination Regulations:
  - M.Sc. Computer Science
  - M.Sc. Computational Mathematics
- Course Enrolment and Examinations
- New Professor and Stand-In Professors
- Course Offerings in the Summer Semester
- Support for International Master‘s Students
- Questions and Answers

Registration and Enrolment Status

- Remote enrolment documents must be sent to registry@uni-passau.de by 24 April 2020
- Enrolment status still pending for some students
- Student Registration Office will keep trying to find solutions for open cases throughout this week
- If you are currently affected, please e-mail Ms. Beate Seidel as soon as possible: beate.seidel@uni-passau.de
- General information about re-registration and payment details for semester contributions at https://www.uni-passau.de/en/study/getting-organised/re-registration-and-enrolment-status

Basic German-Language Skills

- If you do not have proof of German-language skills when starting out on the programme, you are required to complete a **compulsory German course** during the first year of study **at level A1** CEFR or higher (proof of skills necessary at the end of the first year of study)

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Master‘s Programme Computer Science

About the Programme: Structure

- you can put together your **individual curriculum**
- all offered modules and courses (but compulsory seminar and presentation of master's thesis) are assigned
  - to **one respective focus area** *or*
  - to "**General Area**"
- you should **choose one focus area as your specialisation**
- **language restrictions:** not all focus areas do have a sufficient number of English-taught modules to be studied as your specialisation at the moment. However, you may study individual modules from those areas as 'freely selectable courses' in accordance with the rules below
- if you improve your German proficiency to an extent that you can follow the courses taught in German, you will have a wider range of choices in this degree programme

About the Programme: Focus Areas

Five Focus Areas:

1. Information and Communication Systems
2. IT Security and Reliability
3. Intelligent Technical Systems
4. Programming and Software Systems
5. Algorithmics and Mathematical Modeling

(At the moment, 3. and 5. can be chosen as specialisation by students studying in English exclusively with certain limitations, depending on future staff developments within the Faculty.)

To obtain the degree, you need to accumulate **120 credits** as follows:

- **30 credits for the thesis**, supervised by a professor
- a **minimum of 40 credits from your specialisation** modules (chosen focus area)
- a **minimum of 30 credits from modules outside your specialisation** (from other focus areas or from “General Area”)
- one **seminar** (5 credits, typically in the field of your specialisation)
- for the remaining 15 credits, you are **completely free in your choice** of credits (from your specialisation or from any other focus area – including the “General Area” - but only within the programme)
- German-language skills at level A1 (minimum)

Compulsory Modules

- **Seminars**
  - aim: Specialisation on a research topic and preparation for Master's Thesis
  - not in the 1st or 2nd semester, recommended in the 3rd semester or later
  - presentation of seminars offered in the next semester at an event toward the end of each semester (next time: 15 July 2020 at 6:00 p.m. in HS 5 WiWi)
  - limited number of participants
  - max. 3 attempts: 3rd fail ultimately irrecoverable (exmatriculation)

- **Master's Thesis & Presentation**
  - usually at the end of your studies (at least 40 ECTS required, recommended at least 70-80 ECTS)
  - typically in the field of your specialisation
  - look for potential topics on the pages of the chairs and professorships: www.fim.uni-passau.de/en/study/thesis
  - maximum duration of 6 months for the completion of the thesis (from the day of the supervisor's confirmation of acceptance until the due date)
  - max. 2 attempts: 2nd fail ultimately irrecoverable (exmatriculation)

Examples for Individual Curricula

Sample Curriculum 1	
Specialisation: focus area Information and Communication Systems • Semantic Technologies (7 credits) • Text Mining Project (8 credits) • Web of Things and Services (5 credits) • Data Science Lab (6 credits) • Multimedia Databases (7 credits) • Programming Applications for Mobile Interaction (7 credits) **Total: 40 (≥40) credits**	**Outside your specialisation:** **Algorithmics and Mathematical Modelling** • Computational Logic(7 credits) • Computer Algebra (9 credits) **Intelligent Technical Systems** • Embedded Systems Programming (7 credits) **IT Security and Reliability** • Cloud Security (6 credits) • Dependable Distributed Systems (6 credits) • Advanced IT Security (6 credits) **General Area** • Internship (4 credits) **Total: 45 (≥30) credits**
Master seminar: 5 credits	**Thesis: 30 credits**
Overall Total: 120 (≥120) credits	

Examples for Individual Curricula

Sample Curriculum 2	
Specialisation: focus area IT Security and Reliability • System Security (5 credits) • Security Insider Lab I (12 credits) • Wireless Security (5 credits) • Cloud Security (6 credits) • Dependable Distributed Systems (6 credits) • Advanced Security Engineering Lab (12 credits) • Advanced IT Security (6 credits) **Total: 52 (≥40) credits**	**Outside your specialisation:** **Information and Communication Systems** • Web of Things and Services (5 credits) • Foundations of Energy Systems (6 credits) • Network Science (5 credits) • Advanced Topics in Data Science (5 credits) • Multimedia Databases (7 credits) • Computer Networking and Energy Systems (6 credits) **Total: 34 (≥30) credits**
Master seminar: 5 credits	**Thesis: 30 credits**
Overall Total: 121 (≥120) credits	

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Master‘s Programme Computational Mathematics

Computational Mathematics: Focus Areas

Focus Areas:

1. Algebra, Geometry and Cryptography (AGC)
2. Mathematical Logic and Discrete Mathematics (MLDM)
3. Analysis, Numerics and Approximation Theory (ANAT)
4. Dynamical Systems and Optimization (DSO)
5. Stochastics, Statistics (SS)
6. Data Analysis and Data Management and Programming (DADMP)
7. Applications (A)
8. Key Competencies and Language Training (KCLT)

To obtain the degree, you need to accumulate **120 credits** as follows:

- **30 credits for the thesis**, supervised by a professor (typically in the field of your specialisation, usually at the end of your studies)
- a **minimum of 50 credits from the focus areas AGC, MLMD, ANAT, DSO, SS and in doing so**
  - a minimum of 15 credits from AGC, MLMD
  - a minimum of 15 credits from ANAT, DSO, SS
- a **minimum of 10 credits from the focus areas DADMP, A**
- a **minimum of 4 credits from the focus area KCLT**
- two **seminars** (each 5 credits, typically in the field of your specialisation and not in the first semester)

→ presentation of seminars offered in the next semester at an event toward the end of each semester (next time: 15 July 2020 at 6:00 p.m. in HS 5 WiWi)

- for the remaining 16 credits, you are **completely free** in your choice of courses
- **German-language** skills at level A1 (minimum)

Example for an Individual Curriculum

Sample Curriculum	
AGC, MLMD • Cryptanalysis (9 credits) • Cryptography (9 credits) • Mathematical Logic (9 credits) **Total (AGC, MLMD): 27 (≥15) credits** **ANAT, DSO, SS** • Partial Differential Equations (6 credits) • Operator Theory (9 credits) • Functional Analysis (9 credits) • Learning Theory (9 credits) **Total (ANAT, DSO, SS): 33 (≥15) credits** **In total (AGC, MLMD, ANAT, DSO, SS): 60 (≥50) credits**	**DADMP, A** • Visual Analytics (5 credits) • Network Science (5 credits) • Advanced Topics in Data Science (5 credits) **Total: 15 (≥10) credits** **KCLT** • Scientific Methods and Technical Writing (5 credits) **Total: 5 (≥4) credits**
Master seminar 1: 5 credits	**Master seminar 2: 5 credits**
Thesis: 30 credits	**Overall Total: 120 (≥120) credits**

Additional Study Regulations

- Academic progress: requirement for proof of at least 20 ECTS points after the first semester or 30 ECTS points after the second semester
  - ➢ **Failure to do so will inevitably lead to exmatriculation**

    (For students affected by coronavirus restrictions in the summer semester, there will be exceptions in the implementation of this regulation.)

- Plagiarism assessment: declaration of consent with screening of written work (e.g., use of anti-plagiarism software)
  - ➢ Zero tolerance for plagiarism (improper citation of sources/authors and origins of copyrighted material/images etc.) or cheating in examinations

Violations will result in course failure or expulsion from the programme!

Course Enrolment and Examinations

Stud.IP

- sign up only for courses you really intend to take
- crucial for adequate allocation of resources (suitable lecture halls etc.)
- you should enroll for both lecture (V) and exercise (Ü)

Examinations

- HISQIS examination registration binding
- specific sign-up periods for each faculty
- information event by International Student Assistants before each semester‘s sign-up period
- exceptions in cases of hardship must be reported immediately to the Board of Examiners

New Professor

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Prof. Dr. Stefanie Scherzinger
Scalable Database Systems

Teaching:

- Databases and Information Systems (Bachelor)
- Databases in the Cloud (Bachelor)
- Modern Database Concepts (Master)
- Seminar (Master)

Research:

- Agile software development using NoSQL data stores
- Data processing in the large, in particular, using NoSQL data stores
- Software- and schema evolution during agile software development
- Special-purpose programming and query languages

Stand-In Professors

Prof. Dr. Markus Endres

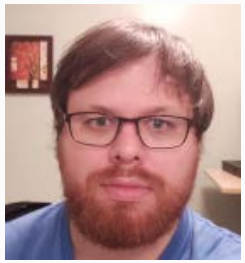
Digital Libraries and Web Information Systems

Prof. Dr. Michael A. Bekos

Algorithms for Intelligent Systems

Prof. Dr. Marco Kuhrmann

Software Engineering I



Prof. Dr. Philipp Kindermann

Applied Machine Learning

The Faculty
Computer Science

Prof. Dr. Joachim Posegga
IT Security

Prof. Dr. Michael Granitzer
Data Science

Prof. Dr. Burkhard Freitag
Information Management

The Faculty
Computer Science

Prof. Dr. Hermann de Meer

Computer Networks & Communication

Prof. Dr. Matthias Kranz

Embedded Systems

Prof. Dr. Stefan Katzenbeisser

Computer Engineering

Prof. Dr. Ignaz Rutter

Theoretical Computer Science

The Faculty
Computer Science

Prof. Dr. Harald Kosch

Distributed Information Systems

Prof. Dr. Gordon Fraser

Software Engineering II

JProf. Dr. Hans Reiser

Security in Information Systems

The Faculty Mathematics

Prof. Dr. Matthias Brandl
Didactics of Mathematics

Prof. Dr. Tomas Sauer
Digital Image Processing

Prof. Dr. Tobias Kaiser
Pure Mathematics

Prof. Dr. Fabian Wirth
Dynamic Systems

The Faculty Mathematics

Prof. Dr. Thomas Müller-Gronbach
Stochastics and Its Applications

Prof. Dr. Brigitte Forster-Heinlein
Applied Mathematics

Prof. Dr. Jens Zumbrägel
Cryptography

Prof. Dr. Martin Kreuzer
Symbolic Computation

Focus Information and Communication Systems (42)

- Multimedia Databases (Döller/Kosch) 7 ECTS
- Data Science Lab (Granitzer) 6 ECTS
- Text Mining Project (Mitrovic) 8 ECTS
- Preference-Based Information Retrieval (Endres) 6 ECTS
- Programming Applications for Mobile Interaction (Kranz) 7 ECTS
- Science and Technology Project in Physical Making, Prototyping and Testing (Kranz) 8 ECTS

Focus IT Security and Reliability (61)

- Cryptography (Kreuzer) 9 ECTS
- System Security (Posegga/Cuellar) 5 ECTS
- Security Insider Lab II – System and Application Security (Posegga) 12 ECTS
- Cloud Security (Reiser) 6 ECTS
- Secure AI Systems (Pöhls, Posegga) 3 ECTS
- Secure Computation (Katzenbeisser) 5 ECTS
- Advanced Security Engineering Lab (Katzenbeisser) 12 ECTS
- Eisenbahnsicherungstechnik (Katzenbeisser) 3 ECTS
- Safety and Security of Critical Infrastructures (de Meer) 6 ECTS

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Focus Programming and Software Systems (43)

- Software Analysis (Fraser) 5 ECTS
- Programming Styles (Gambi) 5 ECTS
- Software Process Engineering (Kuhrmann) 6 ECTS
- Functional Programming (Griebl) 6 ECTS
- Software Project Management (Palm) 7 ECTS
- Practical Parallel Programming (Größlinger) 7 ECTS
- Structure and Implementation of Programming Languages (Größlinger) 7 ECTS

Focus Intelligent Technical Systems (5)

- Scientific Methods and Technical Writing (Kranz) 5 ECTS

(this module might be offered as a block event later in the semester)

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Focus Algorithmics and Mathematical Modeling (80)

- Coding Theory (Abott) 7 ECTS
- Efficient Algorithms (Bekos) 7 ECTS
- Graphs and Network Algorithms* (Bekos) 7 ECTS
- Algorithms for Graph Visualization* (Sandhya) 5 ECTS
- Algorithmic Geometry* (Kindermann) 6 ECTS
- Approximation Algorithms* (Kindermann) 6 ECTS
- Cryptography (Kreuzer) 9 ECTS
- Numerics of Differential Equations (Wirth) 9 ECTS
- Einführung in die Statistik (Gilch) 6 ECTS
- Wahrscheinlichkeitstheorie (Müller-Gronbach) 9 ECTS
- Algebra und Zahlentheorie I (Kreuzer) 9 ECTS

**final module group allocation t.b.d.*

Focus Systems Engineering (62)

- Multimedia Databases (Döller/Kosch) 7 ECTS
- Software Process Engineering (Kuhrmann) 6 ECTS
- Software Analysis (Fraser) 5 ECTS
- Programming Styles (Gambi) 5 ECTS
- Practical Parallel Programming (Größlinger) 7 ECTS
- Secure Computation (Katzenbeisser) 5 ECTS
- Advanced Security Engineering Lab (Katzenbeisser) 12 ECTS
- Eisenbahnsicherungstechnik (Katzenbeisser) 3 ECTS
- Cloud Security (Reiser) 6 ECTS
- Safety and Security of Critical Infrastructures (de Meer) 6 ECTS

General Area (5)

- Scientific Methods and Technical Writing (Kranz) 5 ECTS

(this module might be offered as a block event later in the semester)

Focus Human-Computer Interaction (22)

- Multimedia Databases (Döller/Kosch) 7 ECTS
- Programming Applications for Mobile Interaction (Kranz) 7 ECTS
- Science and Technology Project in Physical Making, Prototyping and Testing (Kranz) 8 ECTS

Focus Data Processing, Signals and Systems (36)

- Coding Theory (Abott) 7 ECTS
- Cryptography (Kreuzer) 9 ECTS
- Data Science Lab (Granitzer) 6 ECTS
- Preference-Based Information Retrieval (Endres) 6 ECTS
- Text Mining Project (Mitrovic) 8 ECTS

Furthermore: Research Internships (16)

- Focus Areas DPSS & SE (Wirth) 8 ECTS each

Focus Algebra, Geometry and Cryptography (18)

- Cryptography (Kreuzer) 9 ECTS
- Real Algebraic Geometry (Kaiser) 9 ECTS

Focus Mathematical Logic and Discrete Mathematics (14)

- Coding Theory (Abott) 7 ECTS
- Efficient Algorithms (Bekos) 7 ECTS

Focus Analysis, Numerics & Approximation Theory (15)

- Functional Analysis (Forster-Heinlein) 9 ECTS
- Integral Transformations (Fink) 6 ECTS

Focus Dynamical Systems and Optimization (9)

- Numerics of Differential Equations (Wirth) 9 ECTS

Focus Stochastics, Statistics (14)

- Einführung in die Statistik (Gilch) 6 ECTS
- Paneldatenanalyse (Fritsch) 5 ECTS
- Computational Statistics - Statistical Learning in R (Schnurbus) 3 ECTS

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Focus Data Analysis, Data Management & Programming (58)

- Multimedia Databases (Döller/Kosch) 7 ECTS
- Data Science Lab (Granitzer) 6 ECTS
- Text Mining Project (Mitrovic) 8 ECTS
- Practical Parallel Programming (Größlinger) 7 ECTS
- Functional Programming (Griebl) 6 ECTS
- Algorithmic Geometry* (Kindermann) 6 ECTS
- Approximation Algorithms* (Kindermann) 6 ECTS
- Graphs and Network Algorithms* (Bekos) 7 ECTS
- Algorithms for Graph Visualization* (Sandhya) 5 ECTS

**final module group allocation t.b.d.*

Focus Applications (10)

- Quantitative Methoden in Finance (Entrop) 5 ETCS
- Marktforschung (Totzek) 5 ECTS

Support for International Master‘s Students

International Coordinator

Wolfgang Mages

Room 239, IT-Zentrum (International House)
Phone: +49 851 - 509 3066
E-Mail: masters@fim.uni-passau.de

International Student Assistants

Ashish, Basma, Laura

E-Mail: master-help@fim.uni-passau.de

iStudi Coach: your central contact person

Coach for international degree-seeking students:

- Individual orientation: Whom to ask?
- Network of partners inside and outside the University
- Career coaching and application checks
- Career orientation programme: iStudi Pass

Contact details:
Luise Haack
iStudi Coach
Tel.:+49 (0)851 509-1173
Administration Building, VW 106
During COVID-19 lockdown:
Use e-mail or Stud.IP for first contact:
istudicoach@uni-passau.de
http://www.uni-passau.de/en/iStudi

iStudi Pass: how does it work?

1. Find all details, registration options and recommended events online: http://www.uni-passau.de/en/iStudiPass
2. Attend at least six training measures from five of the following modules:
   - Application skills
   - Company networking
   - Intercultural skills
   - German language skills
   - Degree success*
   - Volunteering*

iStudi Pass: how does it work?

1. Find all details, registration options and recommended events online: http://www.uni-passau.de/en/iStudiPass
2. Next possible events:
   - Introduction “Working in Germany”: Stud.IP 63101, April 29, 6 p.m. CEST
   - Webinars “Your application for Germany”: Stud.IP 63102 I, II, III
3. Receive a certificate to convince possible employers that you are well prepared for the German job market

iStudi Pass: why to attend?

„Guys, participate in this programme without any considering! It will broaden your horizons in the field of career in Germany. Attend all events even if you have already a stamp in that particular module!“

„It was simply infotainment (information + entertainment)“

„I would definitely recommend this program for every student considering the fact that I managed to get a job offer with no prior work experience.“

...say international students who have completed the programme.

FSinfo

FS info
Fachschaft für Informatik und Mathematik

Faculty's Student Committee (FSinfo)

We support you in your studies, represent you in university committees, collect and provide old exams, and keep you informed about important dates and deadlines.

Consultation hours

As long as no teaching can be held on campus, our consultation hours are taking place virtually at `https://fsinfo.uni-passau.de/videochat`.

Day	Time	Language
Tuesday	2pm - 3pm	German
Tuesday	3pm - 4pm	English

contact

FS info
Fachschaft für Informatik und Mathematik

Please don't hesitate to approach us in case you face any problems or open questions regarding your studies!☺

Feel free to give us feedback on teaching in general or on the online teaching in particular.

Office: IM 244 (currently closed)

Mail: `fsinfo@uni-passau.de`

Homepage: `https://fsinfo.fim.uni-passau.de`

Chat: `https://fsinfo.uni-passau.de/chat`

fsinfopassau

FIM Technical Support

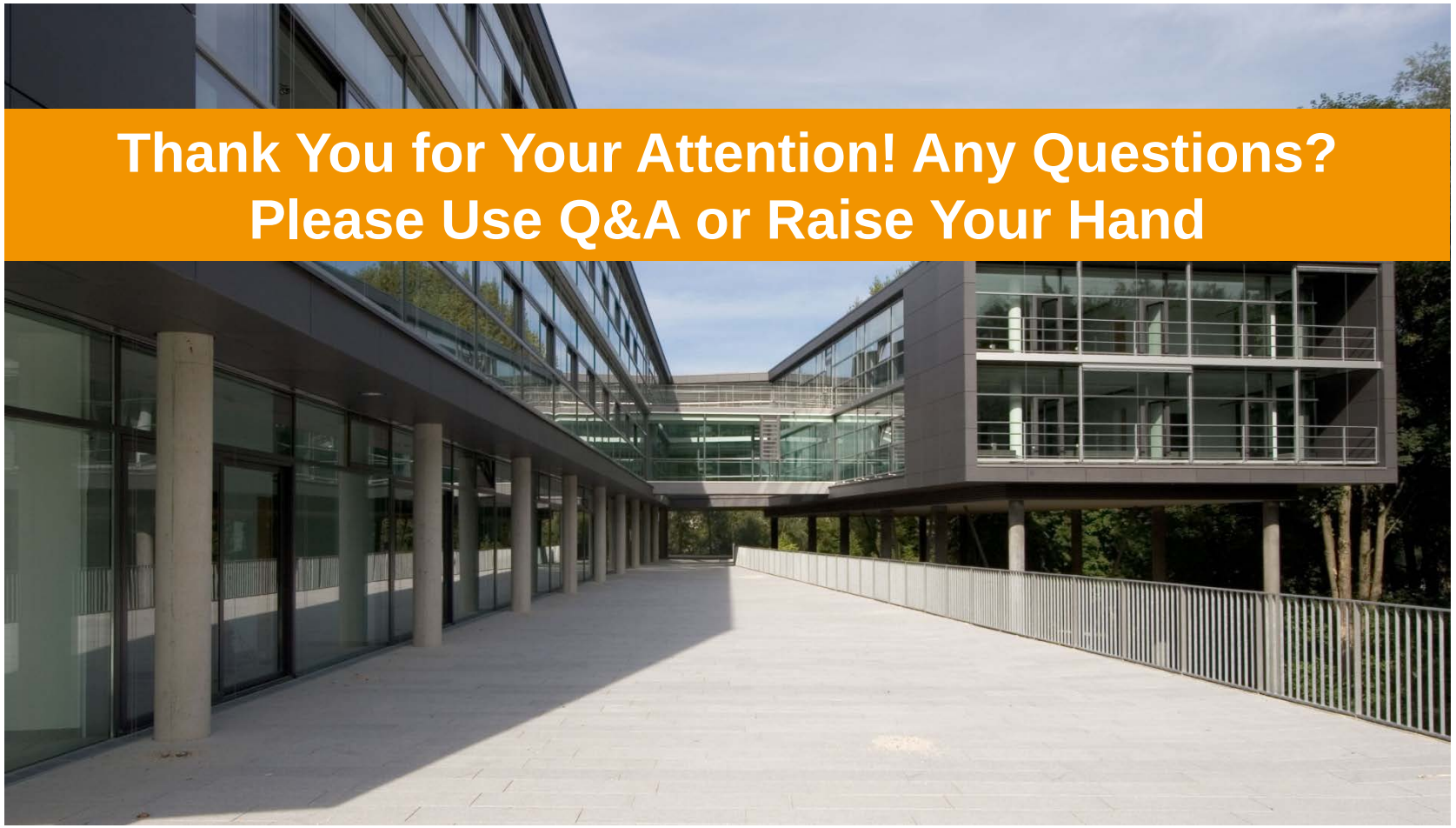
English-language information about the FIM Technical Support can be found at: https://www.fim.uni-passau.de/en/it-services/

Please consult the introduction brochure at: https://www.fim.uni-passau.de/fileadmin/dokumente/fakultaeten/fim/it/FIM_IT_Services_Intro_en_short.pdf

FIM IT-Dienste

Aktuelle Informationen des IT Supports:
https://www.fim.uni-passau.de/it-dienste/

Leitfaden für neue Nutzer:
https://www.fim.uni-passau.de/it-dienste/leitfaden-fuer-neue-nutzer/


Thank You for Your Attention! Any Questions?
Please Use Q&A or Raise Your Hand