Information Event for Master‘s Students and Advanced Bachelor‘s Students

Faculty of Computer Science and Mathematics
Wednesday, 05 February 2020
Agenda

• New professor and (new) stand-in professors
• Hightech Agenda Bayern
• Degree programme developments
• Course offerings in the next semester
• Seminar information
• Questions, feedback and discussion
New Professor

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

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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

*pending confirmation
New Government Initiative for the State of Bavaria

- 2 billion euros invested state-wide to strengthen research, teaching and businesses in the fields of technology and artificial intelligence
- 12 new computer science professorships at the University of Passau throughout the next few years
- 3 new professorships already underway, to be appointed a.s.a.p.:
  - Mathematical Data Science
  - Computational Rhetoric and Natural Language Processing
  - Secure Intelligent Systems
- New English-language master’s degree planned for summer 2021
Degree programme developments

M.Sc. Mobile and Embedded Systems

- Suspension of admissions (since winter semester 2019/2020) to be continued indefinitely, no more new admissions to the programme
- Programme will be closed in the near future, existing students are encouraged to switch to the M.Sc. Computer Science programme

Transfer Master MES → Computer Science

- Requests to change degree programmes may be filed year-round
- No more need to submit formal applications through Campusportal
- Requirement: total of 110 ECTS points from relevant computer science coursework (undergraduate studies + modules from Uni Passau)
- International Coordinator provides guidance throughout the process, please make appointments for assistance: masters@fim.uni-passau.de

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Focus Information and Communication Systems:

- Multimedia Databases (Döller/Kosch)
- Data Science Lab (Granitzer)
- Text Mining Project (Mitrovic)
- Preference-Based Information Retrieval (Endres)
- Programming Applications for Mobile Interaction (Kranz)
- Innovative Industrial Software (Kranz)
- Ideation and Prototyping for Industrial Innovation (Kranz)
- Industrial Innovation Lab (Kranz)
- Science and Technology Project in Physical Making, Prototyping and Testing (Kranz)
Focus Programming and Software Systems:

- Software Analysis (Fraser)
- Software Process Engineering (Kuhrmann)
- Functional Programming (Griebl)
- Software Project Management (Palm)
- Virtual Machines and Runtime Systems (Größlinger)
- Practical Parallel Programming (Größlinger)
- Domain-Specific Languages (Größlinger)
Focus IT Security and Reliability:

- Cryptography (Kreuzer)
- System Security (Posegga/Cuellar)
- Security Insider Lab II – System and Application Security (Posegga)
- Cloud Security (Reiser)
- Secure Computation (Katzenbeisser)
- Advanced Security Engineering Lab (Katzenbeisser)
Focus Algorithmics and Mathematical Modeling:

- Coding Theory (Abott)
- Efficient Algorithms* (Bekos)
- Graphs and Network Algorithms* (Bekos)
- Algorithms for Graph Visualization* (Sandhya)
- Algorithmic Geometry* (Kindermann)
- Approximation Algorithms* (Kindermann)
- Introduction to Statistics (Gilch)
- Algebra und Zahlentheorie I (Kreuzer)

*final module group allocation t.b.d.

Focus Intelligent Technical Systems:

- Scientific Methods and Technical Writing (Kranz)
- Embedded Systems Programming (Kranz)
M.Sc. MES course offerings next semester (preliminary)

Focus General Area:
- Efficient Algorithms (Bekos)
- Scientific Methods and Technical Writing (Kranz)

Focus Systems Engineering
- Multimedia Databases (Kosch)
- Cloud Security (Reiser)
- System Security (Posegga)
- Secure Computation (Katzenbeisser)
- Advanced Security Engineering Lab (Katzenbeisser)
- Embedded Systems Programming (Kranz)
- Software Process Engineering (Kuhrmann)
- Preference-Based Information Retrieval (Endres)
Focus Human-Computer Interaction

- Multimedia Databases (Kosch)
- Programming Applications for Mobile Interaction (Kranz)
- Ideation and Prototyping for Industrial Innovation (Kranz)

Focus Data Processing, Signals and Systems

- Data Science Lab (Granitzer)
- Text Mining Project (Mitrovic)
- Preference-Based Information Retrieval (Endres)
- Cryptography (Kreuzer)
- Algorithms for Graph Visualization (Sandhya)

Furthermore: Research Internships
M.Sc. Computational Mathematics courses next semester (preliminary)

Focus Algebra, Geometry and Cryptography
- Cryptography (Kreuzer)
- Real Algebraic Geometry (Kaiser)

Focus Mathematical Logic and Discrete Mathematics
- Coding Theory (Abott)
- Efficient Algorithms (Bekos)

Focus Analysis, Numerics & Approximation Theory
- Functional Analysis (Forster-Heinlein)
- Integral Transformations (Fink)

Focus Dynamical Systems and Optimization
- Numerics of Differential Equations (Wirth)

Focus Stochastics, Statistics
- Paneldatenanalyse (Fritsch)
- Computational Statistics - Statistical Learning in R (Schnurbus/Fritsch)

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M.Sc. Computational Mathematics courses next semester
(preliminary)

Focus Data Analysis, Data Management & Programming

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

*final module group allocation t.b.d.

Focus Applications

• Quantitative Methoden in Finance (Entrop)
• Marktforschung (Totzek)
Seminar information

• Compulsory seminars have priority over research seminars
• Decentralised registration at each single seminar (no longer registration for „main seminar“ in Stud.IP)
• 9 seminars in summer semester 2020 for various degree programmes (preliminary)
• A current overview can be found at https://www.fim.uni-passau.de/fileadmin/dokumente/fakultaeten/fim/dekanat/Seminare/20200122_Seminar_Presentation.pdf (preliminary)
• Priority assignment of slots based on progress and student preference
• Students who cannot complete their compulsory seminars during the summer semester should sign up for the next seminar presentation in winter semester on Stud.IP: https://studip.uni-passau.de/studip/dispatch.php/course/details?sem_id=a0e99b689892bec783e496fd8f627bb7

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Questions, feedback and discussion

Thank You for Your Attention!
Any Questions or Feedback?