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

Stand-in Professors

Prof. Dr. Markus Endres

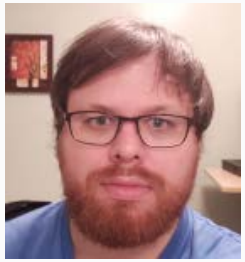
Digital Libraries and Web Information Systems

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

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)

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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)

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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

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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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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=a0e99b689892bce783e496fd8f627bb7

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