

**Thematic Doctoral Programme  
“Informatics”  
Founding Declaration**

**Decision**

According to this founding declaration and in accordance with **§ 19 paragraph 4c, part B** of the statutes of Alpen-Adria-Universität<sup>1</sup> the Thematic Doctoral Programme (DP) “Informatics” will be established as from the 2017/18 academic year on. “Informatics” is understood here as defined by the University of Edinburgh, School of Informatics: “Informatics is the study of the structure, behaviour, and interactions of natural and engineered computational systems.”

**Faculty members (potential supervisors)**

- Assoc.-Prof. Dr. David Ahlström
- O. Univ.-Prof. Dr. Laszlo Böszörményi
- O. Univ.-Prof. Dr. Johann Eder
- O. Univ.-Prof. Dr. Gerhard Friedrich
- Univ.-Prof. Dr. Hermann Hellwagner
- Univ.-Prof. Dr. Martin Hitz
- Assoc.-Prof. Dr. Gerhard Leitner
- Assoc.-Prof. Dr. Mathias Lux
- Em. O. Univ.-Prof. Dr. Dr.h.c. Heinrich C. Mayr
- Univ.-Prof. Dr. Martin Pinzger
- Assoc.-Prof. Dr. Stefan Rass
- Assoc.-Prof. Dr. Peter Schartner
- Assoc.-Prof. Dr. Konstantin Schekotihin
- Assoc.-Prof. Dr. Klaus Schöffmann
- Assoc.-Prof. Dr. Christian Timmerer

**Speaker**

Univ.-Prof. Dr. Hermann Hellwagner  
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**Deputy Speaker**

O. Univ.-Prof. Dr. Johann Eder  
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**Academic degree**

Dr. techn.

**Duration of studies**

3 years

**Language of instruction**

English

**Profile**

Research in Informatics today is highly specialized in the diverse subareas of Informatics, as also reflected by the participating DP faculty members. Clearly, doctoral students pursuing their projects have to follow, and contribute to, those subarea-specific research lines.

However, there is some common methodological ground in Informatics that all doctoral students should become familiar with and benefit from. The focus of this DP is to teach and gain knowledge and skills in **research methods in Informatics**, complementing the subarea-specific research and engineering competences of the doctoral students.

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<sup>1</sup> See the relevant statutory provision in: Mitteilungsblatt, 6. Stück, issued on 16.12.2015 (Beilage 3, <https://www.aau.at/universitaet/service-kontakt/mitteilungsblaetter/mitteilungsblaetter-2015-2016/> )

The courses at the core of this DP are therefore research methods oriented. The added expertise in methods provides the basis for discussions, collaboration and mutual support among the doctoral students and with their supervisors, respectively; specific courses provide a formal framework for those types of interactions. Co-teaching of courses and co-supervision of doctoral students are used to broaden the students' perspectives and enable them to benefit from competencies in methods of DP faculty members other than their direct supervisors. In addition, two peer-reviewed articles have to be published by each doctoral student (as a first author).

### Research areas

Informatics research at AAU is carried out by eight research groups; the affiliation and the research areas of the DP members are as follows (cf. also <http://www.uni-klu.ac.at/tewi/inf/index.html>):

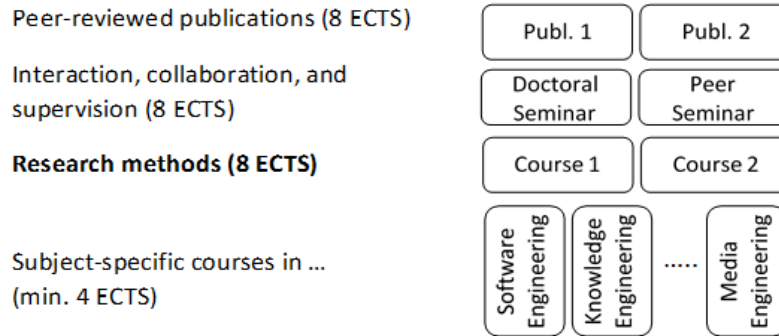
- **Application Engineering (Mayr):** Modeling, Model Transformation, Requirements Engineering, Natural Language Processing, Application Architectures, Ambient Assisted Living.
- **Intelligent Systems and Business Informatics (Friedrich, Schekotihin):** Knowledge Acquisition and Representation, Model-based Diagnosis, Knowledge-based Recommender Systems, Consumer Buying Behavior and Decision Support, Mission Planning, Mass Customization, Semantic Web.
- **System Security (Rass, Schartner):** Security in Complex IT Systems, Security Concepts and Their Basics, Mathematical Fundamentals of Cryptology, Design and Analysis of Cryptographic Mechanisms, Key Management and Authentication, Applied Cryptology, Security in Distributed Systems and Networks.
- **Information and Communication Systems (Eder):** Business Process Automation, in particular Temporal Issues, Evolution, Integration, and Interoperability (Workflow Systems, Web Services, Web Technologies), Information Systems for Medical Research.
- **Interactive Systems (Ahlström, Hitz, Leitner):** Usability Engineering and Interface Design Methodology, Novel Interaction Mechanisms, Non-classical User Interfaces, Cognitive Psychology in the Context of User Interfaces, Smart Environments Control and Interaction.
- **Software Engineering (Pinzger):** Theories, Methods, Processes, and Techniques for Building and Evolving Large, Complex, and Long-living Software Systems.
- **Distributed Multimedia Systems (Böszörményi, Lux, Schöffmann):** Self-organizing Multimedia Content Delivery, Interactive Image and Video Search, Multimedia Content Visualization, Social Aspects of Multimedia Information Systems, User-centered Multimedia Information Retrieval, Applications in the Medical Domain (Endoscopy).
- **Multimedia Communication (Hellwagner, Timmerer):** Multimedia Communication and Content Adaptation, Dynamic Adaptive Streaming over HTTP (DASH), Multimedia Content Dissemination in Information-Centric Networks, Multimedia in Emergency Response, Standardization (MPEG).

### Admission prerequisites

- Master in Informatics, Computer Science, or related study programme at a national or international university
- Admission to Doctoral Studies of Technical Sciences at AAU
- Confirmation of supervision by a DP faculty member

### Graduation requirements

- Doctoral thesis (supervised, at least w.r.t. methodology, by two DP faculty members from different research groups)
- Performance record (compatible with the rules of the Doctoral Studies of Technical Sciences at AAU, "Dr. techn."), i.e., at least 28 ECTS according to the DP structure depicted as follows:



A sufficient number of courses on research methods (each co-taught by at least two DP faculty members) will be continually offered. High-quality, methods-oriented, doctoral-level courses taken at other AAU departments, other universities, international summer/winter schools or as provided by international educational consortia can be credited as well. The publications have to be first-authored by the student and be at least of Class II in the AAU publication classification system.

### Admission procedure

For the admission to the DP the current curriculum for doctoral studies of Alpen-Adria-Universität Klagenfurt has to be taken into account.

Applicants are required to send

- documents (certificates, letter of motivation and/or evidence of skills in a DP research area),
- envisaged dissertation topic, and
- supervision commitment by one of the faculty members of the DP

to the contact address below.

The decision about admission (potentially, after a hearing) will be taken jointly by the DP faculty members.

### Deadline

Applications from prospective doctoral students for winter semester 2017/18 will be accepted until July 31, 2017.

### Contact

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