

Prof. Dr. Hartmut Schmeck

Karlsruhe Institute of Technology – KIT
Institute AIFB –Geb. 05.20
76128 Karlsruhe
Germany

phone +49 721 608 - 4242
fax +49 721 608 - 6581
email Hartmut.Schmeck@kit.edu
www.aifb.uni-karlsruhe.de



Summary

Hartmut Schmeck is a Full Professor of Applied Informatics at the Karlsruhe Institute of Technology - KIT. He is (co-)author of more than 110 publications on advanced algorithms and architectures, in particular on bio-inspired methods in optimisation, algorithms for reconfigurable architectures, and, more recently, on self-organising adaptive systems. He has been program and conference chair for numerous international workshops and conferences (a.o. RAW, ARCS, IFIP BICC 2006, 2008, ATC 2009), is a key member of the "Organic Computing Initiative" and coordinator of the German priority research program SPP 1183 on "Organic Computing". At Karlsruhe, he is the Scientific Spokesperson of the newly founded KIT-Focus "COMMputation", emphasizing the inherent combination of communication and computation.

Education and Positions

- 1969 – 1975 Studies of mathematics and computer science at Univ. Kiel and Waterloo
- 1975, 1981, 1990 Dipl.-Inform. (Univ. Kiel), Dr.rer.nat (Univ.Kiel), Dr.habil. (Univ.Kiel)
- 1975 – 1991 Research Associate at the University of Kiel, Germany
- 1983 – 1984 Visiting Assistant Professor at Queen's Univ., Kingston, Canada
- 1990 Guest Professor at Technical University at Lyngby, Denmark,
- 1991 – present Full Professor of Applied Informatics at the Univ. Karlsruhe, Germany
- 2000 – 2002 Dean of the Faculty of Economics and Business Engineering, Univ. Karlsruhe
- 2008 – present Scientific Spokesperson of the KIT-Focus COMMputation

Research Profile

Hartmut Schmeck is known for his work on bio-inspired algorithms, on the design of algorithms for dynamically reconfigurable architectures, and on the design and technologies for e-learning. Typical fields of applications are scheduling, vehicle routing, and supply chain planning, special attention is paid to optimization problems with dynamically or probabilistically changing parameters and to multi-objective optimization problems.

In recent years his major area of research has been the design and analysis of adaptive self-organising systems with a focus on algorithms and architectures supporting controlled self-organisation as specified in the research program on organic computing.

His group currently consists of 14 fulltime researchers working in a range of projects funded by the German Research Foundation (DFG), German Federal Ministries, and by industrial partners (EnBW, FIDUCIA IT AG, Karlsruhe). Besides coordinating the DFG-funded priority program on Organic Computing Hartmut Schmeck is working on "Organic Traffic Control" with the objective to develop self-organizing, adaptive traffic light controllers and on "Observation and Control of Collaborative Systems". Another recent focus of his research within the cooperative research projects MeRegio and MeRegio Mobile is the application of optimisation techniques and of key concepts of organic computing in smart energy systems, with the objective to improve energy efficiency and to integrate electric vehicles and plug-in hybrid vehicles into the energy system, exploiting their potential to provide a flexible, dynamically available and mobile storage for electricity.