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Biography

Friedemann Mattern obtained his Ph.D. from the University of Kaiserslautern, Germany, in 1989. From 1991-1994 he was Professor of computer science at Saarland University, and from 1994-1999 Professor of practical computer science and distributed systems at Darmstadt University of Technology. In July 1999 he was appointed full Professor at the ETH Zurich. Professor Mattern established a ubiquitous computing laboratory at ETH Zurich and conducts several research projects in this area.

Research Interests

Friedemann Mattern leads the distributed systems research group at the department of computer science. His research interests encompass infrastructures for ubiquitous computing, models and concepts for distributed computations, Internet applications, and programming of parallel and distributed systems. Two recent projects are Smart-Its and the M-Lab:

Smart-Its. *www.inf.ethz.ch/vs/res/proj/smartits.html*
The Smart-Its project is conducted under the European Union's Disappearing Computer initiative within the Future and Emerging Technologies programme. Its goal is to develop unobtrusive, deeply interconnected smart devices – called Smart-Its – that can be attached to everyday items in order to support new functionality. The Smart-Its project is conducted in cooperation with the Perceptual Computing and Computer Vision Group (ETH), the Computing Department at Lancaster University (U.K.), TecO (Germany), PLAY (Sweden), and VTT (Finland). The main objective of our group is to develop a hardware prototype based on Bluetooth and to evaluate infrastructures for interconnected embedded systems.

The M-Lab *www.m-lab.ch*
The M-Lab is a joint project of the University of St. Gallen and ETH Zurich. It identifies and creates effective business applications for smart things in the area of business-to-business – from the idea through to the prototype. Within this area its interest centers on the fields of life sciences, retail, automotive and logistics. Its goal is to build up a critical mass of highly qualified researchers and practitioners in the field of applied ubiquitous computing. Industrial project partners are among others SAP, Novartis, Volkswagen, Swisscom, Paul Hartmann.

Recent Publications

Friedemann Mattern: *The Vision and Technical Foundations of Ubiquitous Computing.* To appear in Upgrade, October 2001

Friedemann Mattern: *Ubiquitous Computing - Der Trend zur Informatisierung und Vernetzung aller Dinge*. In: Der Weg in die mobile Informationsgesellschaft, 6. Deutscher Internet-Kongress, dpunkt-Verlag, September 2001

Lars Erik Holmquist, Friedemann Mattern, Bernt Schiele, Petteri Alahuhta, Michael Beigl, Hans-W. Gellersen: *Smart-Its Friends: A Technique for Users to Easily Establish Connections between Smart Artefacts.* In: Proc. Ubicomp 2001, Springer-Verlag, September 2001

Friedemann Mattern, Marc Langheinrich: *Allgegenwärtigkeit des Computers - Datenschutz in einer Welt intelligenter Alltagsdinge.* In: G. Müller, M. Reichenbach (Hrsg.): Sicherheitskonzepte für das Internet, Springer-Verlag, pp. 7-26, Mai 2001

Marc Langheinrich, Friedemann Mattern, Kay Römer, Harald Vogt: *First Steps Towards an Event-Based Infrastructure for Smart Things.* In: Ubiquitous Computing Workshop (PACT 2000), October 15-19, 2000, Philadelphia, PA