Annual Report 2007 – 2008(September)

Informatik 5 **Information Systems**

Staff

- Professors:

  Prof. Dr. rer. pol. Matthias Jarke
  Prof. Dr. rer. nat. Thomas Berlage
  Prof. Gerhard Lakemeyer, Ph.D.
  Prof. Wolfgang Prinz, Ph.D.
  Prof. Dr. rer. nat. Thomas Rose

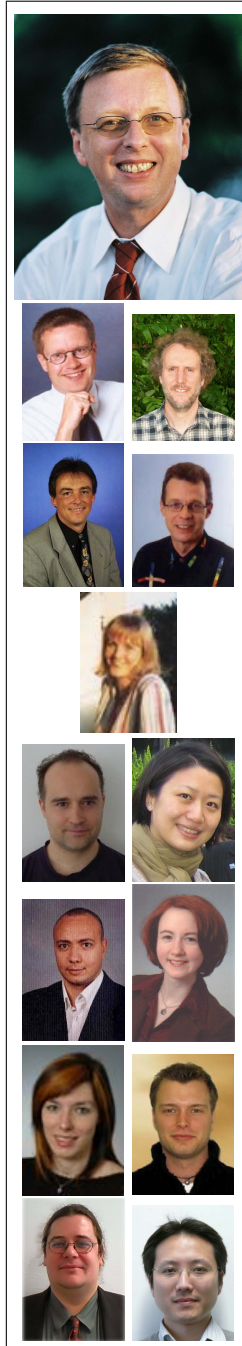- Secretary:

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- Researchers:

  Sebastian Brandt
  Yiwei Cao
  Mohamed Amine Chatti
  Sandra Geisler (since 02.06.2008)
  Anna Glukhova (since 15.10.2007)
  David Kensche
  Dr. Ralf Klamma
  Xiang Li (since 01.05.2007)
  Dr. Erika Linz (until 30.09.2007)
  Dominik Lübbers (until 31.08.2008)
  Michalis Miatidis (until 30.04.2007)
  Zinayida Petrushyna (since 03.03.2008)
  Dr. Christoph Quix
  Marcus Raddatz (until 31.03.08)
  Khaled Rashed (since 01.10.2007)

- Researchers continued:

  Dr. Marc Spaniol (until 29.02.2008)
  Dr. Satish Srirama
  Elisabeth Birk (since 01.04.2008)
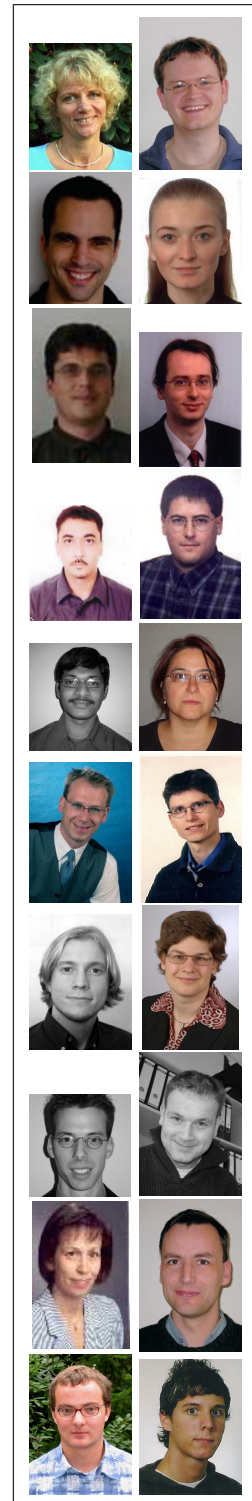
- Visiting Lecturers:

  Dr. Andreas Becks, Fraunhofer FIT
  Dr. Wolfgang Broll, Fraunhofer FIT
  Stefan Hirschmeier, Fraunhofer FIT
  Jessica Huster, Fraunhofer FIT
  Dominik Schmitz, Fraunhofer FIT
  Dr. Christian Seeling, Fraunhofer FIT

- Technical Staff:

  Tatiana Liberzon
  Reinhard Linde
  Eric Heder (until 29.08.2008)
  Daniel Plötzer (since 03.09.2007)

- Student Researchers:

  Anamika Agrawal, Dimitrios Andrikopoulos, Thomas Arzdorf, Martin Bachwerk, Canan Bicer, Aleksandar Bojinovic, Xi Chen, Héctor Díez-Cubeiro, Niels Drobek, Arya Bima Effendi, Martin Frericks, Tian Gan, Adam Gasior, Marcus Gelderie, Ahmet Goer, Georg Hackenberg, Christian Haasler, Andreas Hahne, Christian Hocken, Min Hou, Zille Huma, Holger Janßen, Yan Leng, Xiang Li, Xuan Li, Enrique López Mañas, Andrea Martini, Matthias Moers, Alberto Moyano Sánchez, Nanda Firdausi Muhammad, Negah Nabbi, Takhmina Namozova, Tim Niemüller, Tomas Novotny, Zinayida Petrushyna, Manh Cuong Pham, Dominik Renzel, Sebastian Rüsche, Patrick Selders, Leszek Seweryn, Irfan Simsek, Patrick Schlebusch, Sabrina Steinfels, Sascha Witte, Edwin Yaqub, Ming Zhang, Ziquan Zhu

Overview

Informatik 5 represents the field of databases and information systems at RWTH Aachen University. A major focus is the formal analysis, prototypical development, and practical application of metadata systems. Specific areas include Internet Information Systems and Knowledge Management, Electronic Learning, Database and Repository Technologies, and Requirements Engineering for Complex Systems.

Informatik 5 cooperates closely with the Fraunhofer Institute for Applied Information Technology (FIT) of which Prof. Jarke is Executive Director; in fall of 2007, Prof. Jarke was also appointed Deputy Chairman of the Fraunhofer ICT group with 16 institutes and over 2000 researchers. Two FIT area managers, Prof.Wolfgang Prinz and Prof. Thomas Berlage, hold cross appointments as Associate Professors in Informatik 5. Prof. Jarke is also one of the Founding Directors of the Bonn-Aachen International Center for Information Technology (B-IT); within B-IT, a third joint professorship has been established and filled with Prof. Thomas Rose. In March 2008, a new B-IT Research School for doctoral training has been approved by the NRW state government which will start its operations in the fall of 2008 under the coordination of Prof. Jarke and Prof. Cremers (Bonn).

The years 2007-2008 were a very active period for the Information Systems group. In terms of **new projects**, the main emphasis was on getting our projects in the new Excellence Cluster in Ultra-Highspeed Mobile Information and Communication Systems (UMIC) started and to coordinate its research area "Mobile Web Services and Applications". Prof. Jarke also served on the steering committee of the successful university-wide Future Concept proposal "RWTH 2020: Meeting Global Challenges" and is presently responsible for its subarea "International Recruiting". In addition, the DFG approved a research project group on context-adaptive interaction (CONTICI) we are conducting jointly with groups from the universities of Siegen, Duisburg-Essen, and Hagen. In the summer of 2008, we were also successful in the application for a new large-scale Integrated Project in the field of technology-enhanced learning (ROLE) which will start in early 2009 as a follow-up to the European Network of Excellence PROLEARN. The BMBF-funded project MERKOFER in which some results of our former SFB 476 (IMPROVE) have been further developed for practice innovation, was successfully completed in 2007.

In **teaching**, a major challenge was the switch from the traditional German diploma system to the new Bachelor program which, among others, more than doubled the number of students taking our Introduction to Databases class to about 300. International teaching cooperations such as the EU-funded European Master of Informatics (EuMI) scholarship program, the Cairo University eLearning Center (CUELC) project, and especially the start of a new, RWTH-supported German University of Technology (GUtech) in Oman – supported by Prof. Jarke as temporary Inaugural Dean of the Applied Information Technology curriculum – were also major fields of activity.

Informatik 5 was also very active in **conference organization**. Together with the Informatik 9 group of Prof. Seidl, we organized the 12th GI Conference on Business, Technology, and the Web (BTW 2007) in Aachen in March 2007 which was attended by almost 300 participants. In addition, R. Klamma served as Program Co-Chair of the First European Conference on Technology-Enhanced Learning held in Iraklion, Greece, in September 2007 with over 200 participants. Together with other members of Informatik 5 and externals, he also chaired several PROLEARN-related workshops, summer schools, and doctoral consortia. Y. Cao and M. Spaniol co-organized workshops of standardization committee meetings in the field of Data Management and Exchange (DIN NI-32) and Multimedia Metadata (MPEG-7/21).

The group of **people** at Informatik 5 has developed an unusual diversity, with research assistants from eight different countries, not counting numerous further countries among our student assistants. In the reporting period, four doctoral theses were completed in 2007 (Christian Seeling, Marc Spaniol, Carla Valle, and Andreas Zimmermann), another four until September 2008 (Emmanuel Nayo, Gertraud Peinel, Martin Sedlmayr, Satish Srirama). In addition, over 30 diploma and master theses were completed under supervision of professors from Informatik 5. In December 2007, Prof. Jarke completed an eight-year term as Board Member of the Gesellschaft for Informatik (GI) e.V., the last four years as President. In this role, he also participated in the BMBF working group of the IT Summits conducted by Chancellor Angela Merkel in 2006 and 2007, following the Informatics Year 2006.

Research Projects

UMIC: Ultra High-Speed Mobile Information and Communication

M. Jarke, R. Klamma, C. Quix, Y. Cao, S. Geisler, D. Kensche, X. Li, S. Srirama,
D. Andrikopoulos, A.B. Effendi, C. Haasler, A. Hahne, M. Hou,
H. Janßen, X. Li, E. López, A. Martini, M.C. Pham, D. Renzel,
P. Schlebusch, M. Jansen (Sbg), G. Toubekis (Sbg), A. Salim (Sbg)

The "Ultra High-Speed Mobile Information and Communication (UMIC)" is a research cluster under the German Excellence Initiative promoted by the German Federal and State Government at German Universities. UMIC is the only Excellence Cluster fully dedicated to the field of information and communication technology approved in the first excellence competition in 2006.
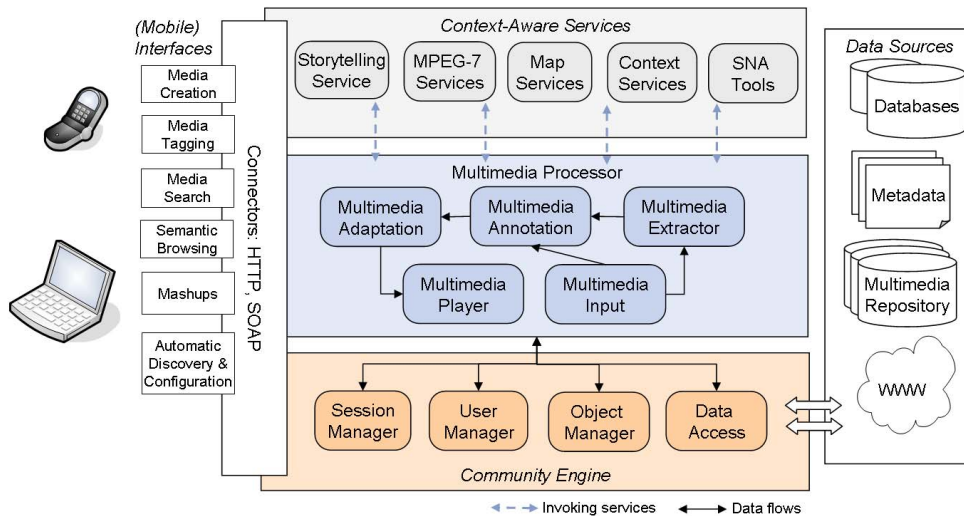
More than 20 institutions at RWTH Aachen participate in UMIC, aiming at interdisciplinary design of ultra high-speed mobile information and communication systems. Concepts and demonstrators for smart, mobile, broadband, low-cost systems will be developed to support the demanding applications of the next-decade mobile Internet.

Based on previous work in SFB 427 and in the GK "Software for Mobile Communication Systems", Informatik 5 works closely together with many institutes of electrical engineering, mechanical engineering, architecture, and computer science in two subprojects in the research area of "Mobile Applications and Services" which is coordinated by Prof. Jarke. This research area focuses on mobile multimedia processing and environmental information processing. The concepts of UMIC were successfully presented at the CeBIT 2007.

Future Mobile Internet Services
The mobile communication and applications' impacts in developing countries such as Afghanistan and Somalia will be paid special attention. The related scenarios as well as requirements will be analyzed.

In 2007, the Virtual Campfire scenario has been further developed as mobile social software to bridge media and communities across mobile platforms. In Virtual Campfire cultural heritage information collected from developing countries is to be integrated into a multimedia non-linear digital storytelling system for communities. The concept and prototypes were successfully demonstrated on a number of international conferences and workshops, as well as other events such as UMIC Day 2007, RWTH Transparent. We also maintain the Bamiyan Community (http://www.bamiyan-development.org) that brings together international researchers, governmental and administrative officers for the conservation work in Bamiyan, Afghanistan.

System architecture of Virtual Campfire as a scenario for Future Mobile Internet Services within the UMIC project
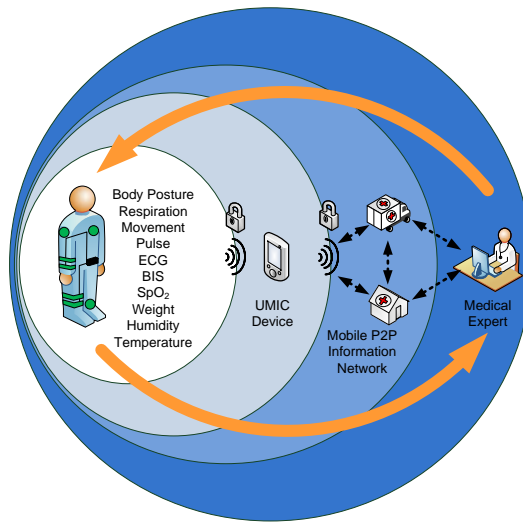
Mobile Web Service Provisioning

Intelligent phones as web service providers is the topic of a doctoral thesis in cooperation with Ericsson Eurolabs done in the context of the Graduate College "Software for Mobile Communication Systems". A number of results concerning aspects of service discovery, mediation, quality of service issues like security and scalabilty, application and usability analysis strategies for mobile web service providers were published. Currently the project is being funded by Ultra High-Speed Mobile Information and Communication (UMIC).

Mobile and Wearable P2P Information Management in Health Net Applications

Informatik 5 cooperates with the institute for textile technology (ITA), the Philips Chair for Medical Information Technology (MEDIT), and Informatik 9 (Data Management and Exploration, T. Seidl). The aim is to develop a P2P network in which patients, doctors, nursing staff, and emergency services have full access to information and services in their mobile work environment. Data about the health status of a patient is collected by a network of sensors integrated in the textile clothes. The data can be reviewed by doctors to consult the patients online, or by the emergency service to improve the diagnosis in an emergency situation.

As a first result, the groups have created a prototype for a shirt which includes an ECG sensor and acclerometer. The sensor information is processed by a device which sends the data to a mobile client (e.g. a PDA or a mobile phone). The client may forward the patient's data to a server where health experts can analyse the data in detail. To avoid sending of a huge amount of data, the data is pre-classified on the mobile client according to normal and emergency situations. In normal situations, only a highly aggregated summary of the data will be sent; if an emergency situation is suspected, detailed information will be sent to the server.

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The device level scheme for mobile and wearable P2P information management within the UMIC project

The task of Informatik 5 is to model the data which is exchanged in this setting; thereby enabling the automatic integration and exchange of the data.

Metadata and Cooperative Knowledge Management

M. Jarke, C. Quix, S. Geisler, D. Kensche, X. Li, M. Jeusfeld (Uni Tilburg, NL), R. Linde, S. Chaiyakul, C. Schwering, T. Siegbert, E. Yaqub

ConceptBase is a multi-user deductive object manager mainly intended for conceptual modelling, metadata management and model management. The system implements the knowledge representation language *Telos* which amalgamates properties of deductive and object-oriented languages. Version 7.1 of the system was released in May 2008. In this version new functional and arithmetic expressions have been added, the use of the underlying Telos language has been made easier, the support for meta-level formulas has been improved, and a number of bugs have been corrected.

Research in model management focuses on the formal definition of structures and operators for the management of complex data models to support applications dealing with the integration, maintenance, and evolution of data models. Based on the generic role-based meta model *GeRoMe*, the group developed the generic model management *GeRoMeSuite* which includes support for model management operations such as schema matching, composition of mappings, schema integration, and model transformation. A first prototype of the tool has been shown at the 33rd International Conference on Very Large Data Bases (VLDB) in Vienna.

Metadata in Community Information Systems

M. Jarke, R. Klamma, Y. Cao, M.A. Chatti, A. Glukhova, E. Linz, D. Lübbers,
Z. Petrushyna, K. Rashed, D. Schmitz, M. Spaniol, S. Srirama,
D. Andrikopoulos, M. Bachwerk, C. Bicer, A. Bojinovic, X. Chen,
H. Díez-Cubeiro, N. Drobek, A.B. Effendi, M. Frericks, A. Goer, C. Haasler,
G. Hackenberg, A. Hahne, C. Hocken, M. Hou, H. Janßen, X. Li, E. López,
A. Martini, M. Moers, A. Moyano Sánchez, N.F. Muhammad, N. Nabbi,
M.C. Pham, D. Renzel, P. Selders, P. Schlebusch, S. Steinfels, Z. Zhu

Community information systems are a combination of work practices, information, people, digital media theories organized in a way that they support the goals of the community. Metadata in community information systems stabilize the ongoing change management process in these systems. The research goal of the working group is a better understanding of the creation, use, and maintenance of metadata in the context of community systems. These community information systems are designed and applied meeting communities' real needs. With the emerging Web 2.0 paradigm, the connection between user communities and information systems is even tight. A new DFG cluster project Context Adaptive Interaction in Cooperative Knowledge Processes (CONTICI) was started in October.

Several international cooperation activities are carried out. Cooperation with Prof. Nalin Sharda from Victoria University, Melbourne has been further fostered, while he gave lectures and a workshop at his three-month sabbatical stay at Informatik 5 from August to November, 2007. Experiences on developing multimedia information systems have been shared with the group of Prof. Baltasar Fernández Manjón at Universidad Complutense, Madrid, Spain. In addition, many academic events took place within our international Multimedia Metadata Community (http://www.multimedia-metadata.info) in 2007. Research results have been collected in the book "Multimedia Semantics – The Role of Metadata" published by Springer.

Metadata are based on international standards in different domains like Audio-visual Media, E-Learning, Cultural Heritage, Music Information Retrieval, and Geographical Information Systems. Central for our approach is the reflective conceptual architecture ATLAS which incorporates a set of (self-)monitoring tools for the community members and the repository/community middleware. Communities can assess their community needs and evolve the community through the development and change of the community information systems. The monitoring tools allow the measurement, analysis and simulation of community aspects with methods from the semantic web, information retrieval & visualization, data/text/media mining, geospatial database querying, social network analysis, transcriptive algorithms etc.

On the database/repository level we use and develop further scalable state-of-art

database technologies for the management of mass data and metadata for community systems. On the middleware level we realize scalable community hosting services like single-login, variable and fine-granular access control, mobility support, multimedia management, multimedia annotation, interoperable search and retrieval, matching, data/text/media mining etc. The following projects have been worked on from 2007 to September 2008:

SFB 427: Media and Cultural Communication: Agency in Digital Social Networks by Visualization of Multidimensional Patterns of Disturbance

After having organized the successful symposium in 2006 the research in 2007 concentrated on the finalization of our support environment ATLAS for communities of practice in the humanities. M. Spaniol defended successfully his thesis about this topic and several diploma and master projects were conducted. The LAS environment also serves as an application server for the Virtual Campfire demonstration scenario in UMIC. The monitoring environment MediaBase was extended to work with new Social Software media like blogs and wikis. We demonstrated the approach in a colloquium of the SFB and on several international and national conferences. A journal publication was submitted and accepted for publication.

SunSITE Central Europe (http://sunsite.informatik.rwth-aachen.de)

Since 1995, Informatik 5 is active in the field of internet-based community support, both in terms of research on community and web service tools and in terms of providing infrastructures for scientific communities worldwide. For example, Informatik 5 hosted the first website for the city of Aachen in 1995 and, since the same year, manages one of the most successful public-domain Internet servers in the German science net, SunSITE Central Europe. Supported by Sun Microsystems with powerful hardware and base software, SunSITE Central Europe focuses on scientific community support, including mirrors of some of the most important research literature indexes, workspaces for Internet cooperation, and about 1 TB of open source software. Typically, the SunSITE enjoys around 10 million accesses per month.

AdMIRE: Advanced Music Information Retrieval Environment

In this project we investigate the use of metadata technology for the development of intelligent and user-friendly music information retrieval systems. Our goal is the integration of retrieval approaches for different kinds of media (like e.g. text retrieval algorithms for lyrics databases and customized similarity functions for signal processing-based audio features) with a user-friendly interface.In 2007 we developed a prototype that analyzes community-based similarity relationships (like Amazon's "customers who bought this item also bought this one") and tries to mimic them on the basis of automatically extracted audio-based features thereby eliminating the well-known new item problem for music items.Furthermore we started a project which investigates the usefulness of expert and customer reviews on music for its application as a similarity source.

i* Wiki (http://istar.rwth-aachen.de)

Since September 2005, Informatik 5 is hosting the i* Wiki, a platform for researchers

and users to foster investigation, collaboration, and evaluation in the context of the *i** modelling language.

CONTICI: Context Adaptive Interaction in Cooperative Knowledge Processes

M. Jarke, R. Klamma, A. Glukhova, A. Goer, G. Hackenberg, C. Hocken, Z. Zhu

CONTICI is a new project funded by the Deutsche Forschungsgemeinschaft (DFG). The aim of this project is research and development of context adaptive systems for non-well structured knowledge processes. Thereby the adaptivity of cooperative systems to dynamic users requirements presents a main scientific question of this research. CONTICI is a cooperation of four German universities and thus is a cluster project. Beside RWTH Aachen University the project partner are Duisburg-Essen University, Siegen University and FernUniversitaet in Hagen.

Traceable Cooperative Requirements Engineering for Communities-of-practice
The research area of our group in scope of this project covers traceable cooperative requirements engineering for communities-of-practice. During the project evolution models of context, process and cooperation models created by the other project partners have to be established. Hereby, a framework for tracing model changes during the project life has to be developed. This step is followed by the design of the methods for qualitative and quantitative analysis of traces, which will allow the extraction of the best practices out of the executed requirement engineering processes. For analysis and navigation purposes the environment for visualization and management of the collected data has to be created. Next, the tracing results should also be applied as learning materials about the system state and its evolution history.

CUELC: EU Tempus Cairo University E-Learning Centre

M. Jarke, R. Klamma, M.A. Chatti, Z. Petrushyna, D. Kensche,
C. Bicer, N. Drobek, M. Fayek (Cairo University), K. Maillet (INT Evry)

CUELC aims to bridge the currently existing gap between the advanced, technology enhanced teaching and learning methods in Europe and Egypt. In 2007 students of Cairo University and RWTH Aachen University jointly evaluated learning materials for a data structure and algorithms course in Moodle. The three best performing students from RWTH Aachen University were sent to Cairo University to discuss their E-Learning experiences with their Egyptian fellow students.

Teachers and students from Cairo University came to Aachen to participate in intercultural workshop in August, 2008.

PROLEARN: EU Network of Excellence

M. Jarke, R. Klamma, Y. Cao, M.A. Chatti, M. Spaniol, Z. Petrushyna, M. Bachwerk, M. Frericks, X. Li, A. Martini, M. Moers, N.F. Muhammad, A. Moyano Sánchez, D. Senk (IEHK), H.W. Gudenau (IEHK), K. Mavromatis (IEHK), A.Babich (IEHK) and more than 200 other researchers

PROLEARN, started January 1, 2004, is dedicated to join research in the area of professional learning and training focusing on small and medium enterprises (SME). The NoE advances the state of the art in the key areas personalized adaptive learning and interactive media, with learning resources connected to real-world settings and reusable in different contexts. It investigates and advances issues especially relevant for professional training in SME's and larger companies, including brokerage platforms and services, business models for specific markets, and advanced eLearning and knowledge work management arrangements.

Dr. Klamma was the program chair of the Second European Conference on Technology Enhanced Learning (EC-TEL 2007), one of the major events. Also the doctoral consortium at EC-TEL 2007 was organized by the chair. Even after the end of the funding period the chair co-organised the PROLEARN summer school in Ohrid, Macedonia, 2008. The summer school brought together PhD students, teachers, and academics for PhD training and network events. Around 50 PhD students have successfully attended the summer school.

ERASMUS MUNDUS European Master in Informatics (EuMI)

M. Jarke, G. Lakemeyer, R. Klamma, J. Enderle (i9), A. Ferrein, P. Selders

In winter term 2004/2005 the first students were enrolled in this pan-European master program jointly executed with the universities of Trento and Edinburgh. In three different areas of specialisations, Net-Centric Computing, Embedded Systems, and Lifescience Informatics, students are trained at two of the universities to get a double degree in computer science. The program is accompanied by a scholar program to bring world class lecturers from different parts of the world to Aachen. First students finalized their studies in 2006, in some cases with excellent master theses with refereed publications resulting from them.

MErKoFer
Identification and Reuse of Experience Knowledge in Rubber Extrusion Processes

M. Jarke, S.C. Brandt, M. Schlüter, M. Raddatz, T. Namozova, I. Simsek, S. Witte

Building on basic research results achieved in SFB 476, MErKoFer is a collaborative project of Informatik 5 and aiXtrusion GmbH in cooperation with Meteor Gummiwerke K.H. Bädje GmbH & Co. KG. The project is supported by the Bundesministerium für Bildung und Forschung (BMBF). The project has been funded in its initial phase till September 2006, and has been extended until June 2007 to investigate additional aspects of integrated production process analyses.

In continuous production processes the effects of a modification of process parameters on the product can often only be observed after the entire production cycle has been completed. In case of disturbances this causes the waste of ecological and economical resources, if countermeasures do not directly lead back to a stable production within desired specifications. As analytical models exist only for small parts of such processes, experience continues to play an important role here.

In the project's approach, knowledge about the extrusion processes is captured by ontology-based traceability mechanisms for both direct process support of extrusion operators, and for process analysis and improvement based on an integration of data mining techniques. The accumulated knowledge assists in ensuring defined quality standards and in handling production faults efficiently and effectively. The approach was experimentally implemented and evaluated at the industrial partners site. Some generalizable parts of the environment were taken up by aiXtrusion GmbH in their

aiXPerience software environment for process automation and process information systems, to continue the system's application beyond the end of the project.

Zentrum für Softwarekonzepte

M. Jarke, A. Becks (Fraunhofer FIT), C. Quix, T. Rose (Fraunhofer FIT), M. Jentsch (Fraunhofer FIT), T. Knieps(Fraunhofer FIT), A. Schneider(Fraunhofer FIT), W. Wirsam(Fraunhofer FIT), S. Rüsche

The "Zentrum für Softwarekonzepte (ZfS)" is an initiative of Microsoft in cooperation with several academic research institutions in Germany. The goal is to support small- and medium-sized enterprises (SMEs) in Germany by enhancing the knowledge transfer from research institutions to companies. The support is given in form of seminars related to .NET technologies as well as consulting activities for specific problems of a SME. In addition, the ZfS will cooperate with Microsoft Research in researching and developing new and innovative technologies in the area of cooperative information systems, user interfaces, and database technology.

Informatik 5 works closely together with Fraunhofer FIT in this project. Several workshops on .NET or related technologies such as Microsoft Office Sharepoint Server have been given for customers from industry and academia. Furthermore, .NET technologies have been introduced in lectures such as a lab course on developing web applications with .NET. Other activities include the maintenance of the website with several documents (tutorials, white papers, and case studies) on .NET technologies. The website contains also a glossary for terms and acronyms being frequently used in the context of .NET. In addition, the website offers sample code and sample online applications such as the *DBWorld Map*, which is an interactive map of events related database research based on the Microsoft Virtual Earth.

German University of Technology in Oman (GUtech)

M. Jarke, D. Lübbers, M. Bastian (FB 10), M. Westermann, B. Narakat (GUtech)

In 2007, RWTH Aachen University signed a treaty with the Ministry of Education and some investors from the Sultanate of Oman concerning the founding of a private Technical University GUtech in the capital, Muscat. RWTH Aachen University supports the scientific start-up of the university and will provide continuous quality assurance. In addition to private funds, GUtech is supported by scholarships from the Sultanate and by a quality assurance project from DAAD. GUtech initially offers five study programs one of which is called Applied Information Technology (AIT). We helped GUtech

design their Bachelor program in AIT, assisted with the accreditation, and organized the recruiting process for the first faculty positions. Prof. Jarke was appointed Inaugural AIT Dean for up to two years until a permanent dean has been hired locally. In mid-2007, the first AIT students entered a Foundation Year. The Bachelor Program itself starts in October 2008. Dominik Lübbers of Informatik 5 will spend the academic year 2008–2009 in Muscat to assist in the set-up phase and take over some of the first-year teaching.

Other Activities

Service

Prof. Jarke's major administrative and service activities in 2007 included:

- Executive Director, Fraunhofer FIT, Birlinghoven
- Deputy Chairmen, Fraunhofer Group Information and Communication Technology
- Founding Director, Bonn-Aachen International Center for Information Technology (B-IT)
- Inaugural Dean, Applied Information Technology, German University of Technology in Oman (GUtech)
- Coordinator, B-IT Research School Proposal
- President, GI German Informatics Society (2004–2007)
- Member, BMBF Working Group of IT Summit 2007, Potsdam
- DFG elected reviewer for practical computer science (2000–2007)
- Member, Working Group "Hightech Strategy for the Information Society", First Nationale IT Summit of Chancellor Merkel, Potsdam
- Scientific advisory board, Faculty of Informatics, University of Vienna, Austria
- Scientific advisory board, Learning Lab Lower Saxony (L3S), Hannover
- Scientific advisory board (Chair), OFFIS, Oldenburg
- Scientific advisory board, Beta Research School, Eindhoven/Twente, the Netherlands
- Scientific comission, Free University of Bozen, Italy
- Reviewer, Enterprise Software Initiative Baden-Württemberg and LOEWE Excellence Initiative, Hessia
- Supervisory, curatory and scientific advisory board, IBFI, Schloss Dagstuhl
- Jury member, Wissenschaftspreis Stifterverband der Deutschen Wirtschaft
- Jury member, Campus Online competition, Stifterverband der Deutschen Wirtschaft
- Chairman, GI Fellow selection commission
- Jury chair, GI-Innovationspreis
- Second reviewer, doctoral theses in mechanical engineering (Tobias Valtinat) and electrical engineering (Guido Gehlen)

Dr. R. Klamma is a substitute member of the PROLEARN executive board. Dr. Klamma served as advisor of the ERASMUS Mundus master program European Master in Informatics (EuMI).

Y. Cao is member of DIN NI-32 "Data management and data exchange".

Editorial Boards

M. Jarke served on the following editorial boards:
· Decision Support Systems
· Information and Management
· Journal of Universal Computer Science
· Requirements Engineering Journal
· Wirtschaftsinformatik
· Journal of Intelligent Information Systems
· International Journal of Cooperative Information Systems
· Organizational Computing and Electronic Commerce Intelligent Information Systems
· Group Decision and Negotiation
· International Journal of IT Standards and Standardization Research

R. Klamma serves as associate editor on IJASS, IJTEL, and IJHSC. He is editing a special issue for IEEE Transactions on Learning Technologies.

M. Spaniol serves as an associate editor of the Journal of Distance Education Technologies (JDET).

W. Prinz served on editorial boards:
· Computer Supported Cooperative Work: The Journal of Collaborative Computing
· i-com Zeitschrift für Interaktive Medien und kooperative Medien

Conference Organization

M. Jarke was General Co-Chair of the BTW-2007 Conference in Aachen, and Panel Chair of the VLDB 2007 Conference in Vienna, September 2-8, 2007. Moreover, he served on the following program committees: International W3C Workshop Mobile Response, Sankt Augustin, 22.-23.2.2007; Wirtschaftsinformatik 2007, Karlsruhe, 28.2.-2.3.2007; Software Engineering 2007, Hamburg, 27.20-3.2007; 23rd International Conference on Data Engineering (ICDE 2007), Istanbul, April 16-20, 2007; WWW 2007, Banff, May 8-10, 2007; 19th CAiSE, Trondheim, June 11-15, 2007; EC-TEL 07, Iraklion, September 2007; RE 2007, Delhi, September 2007; LADL-07 Workshop at ECDL 2008, Budapest, September 20, 2007; Software Engineering 2008, Munich, February 19-22, 2008; WWW 2008, Beijing, April 21-25, 2008; Intl. Symposium Mobile Response 2008, Bonn, May 29-30,2008; 20th CAiSE, Montpellier, June 16-20, 2008; REFSQ 2008, 8th Intl Peer-to-Peer Conference (P2P 2008), Aachen, September 8-11, 2008; 27th Intl Conf Conceptual Modelling (ER 08), Barcelona, October 20-23, 2008; Doctoral Consortium, ICIS 2008, Paris, December 11-14, 2008.

Y. Cao co-organized the DIN NI-32 "Data management and data exchange" meeting on April 24, 2008 at Informatik 5 and the 1st Intl. Workshop on Story-telling and Educational Gaming (STEG'08) on September 16, 2008, Maastricht, the Netherlands. She was member of the program committee of the I-Know'07 special track KVD'07, M3A Workshop at I-Media'07, MONET'07, and MapISNet'07, ACM/IEEE CSTST'08, M3R'08, Monet'08, I-Media'08 special track CPASW'08, I-Semantics'08 special track OLM, SIRTEL'08 at EC-TEL, STEG'08 at EC-TEL, and MIMIC'08.

A. Glukhova co-organized the 1st Intl. Workshop on Story-telling and Educational Gaming (STEG'08) on September 16, 2008, Maastricht, the Netherlands, and the workshop on "Mobile and Contextualized Learning", Prolearn Summer School, Ohrid, Macedonia, June 18, 2008.

D. Kensche co-organized 12. GI-Fachtagung für Datenbanksysteme in Business, Technologie und Web (BTW 2007).

R. Klamma was program chair of the Second European Conference on Technology Enhanced Learning (EC-TEL 2007), Crete, Greece, September 17-19, 2008. He was also co-chair of the following events: Doctoral Consortium at EC-TEL 2008, STEG'08 at EC-TEL 2008, 4. PROLEARN Summer School in Technology Enhanced Learning, Ohrid, Macedonia, June 2008, 3. PROLEARN Summer School in Technology Enhanced Learning, Fréjus, France, May 2007, 7. Workshop of the MPEG-7 Community at I-Media, Graz, Austria, September 2008, Workshop "What is missing in Social Software? Current collaborative practices" at ECSCW 2007, Limerick, Ireland, September 2007, Extreme Learning Labs at Learning World, Berlin, Germany, June 2007, 6. Workshop of the MPEG-7 Community at BTW 2007, Aachen, Germany, March 2007. He served as program committee member / reviewer for the following conferences and journals: ACM Hypertext'08, EC-TEL'08, ECIS'08, BPMS2'08, WEBIST'08, M3R'08, KMIA'08, Mobile Learning'08, ICALT'08, WBC'08, E-Learning'08, CSKGOI'08, IEEE SITIS'08, SMA'08 at IEEE/WIC/ACM Web Intelligence'07, LADL'07 at ECDL'07, LOKMOL'07 at EC-TEL'07, IEEE SITIS'07, CAMA'07 at IEEE/ACM Digital Libraries, I-MEDIA'07, ACM Group'07, ECIS'07, CoKM'07, InSITE'07, CWE'07, Adaption Workshop at UM'07, Electronic Games at ICALT '07, IMSA'07, TenCompetence Workshop'07, EC-TEL'07, WBC'07, KVD'07, I-Media MPEG-7 Community Workshop 2007, ICALT'07, C&T'07, BTW'07, BIT, CACM, IEEE Multimedia, IEEE Internet Computing, IEEE TKDE, Electronic Markets, Electronic Commerce Journal, i-Com.

E. Linz was a member of the program committee of the conference "Medienbewegungen. Praktiken der Bezugnahme", SFB/FK 427, Aachen, April 25-27, 2007.

Z. Petrushyna was an co-organizer of the intercultural workshop "Challenges for Intercultural Virtual Campus Systems", Evry, France and Aachen, Germany, August 27 – August 30, 2008, and of the workshop on "Mobile and Contextualized Learning", Prolearn Summer School, Ohrid, Macedonia, June 18, 2008.

C. Quix served as a member of the program committee of the International Workshop on Semantic Web Architectures For Enterprises (SWAE), Regensburg, Germany, Sep-

tember 2007. He was chair of the organizing committee of the "12. GI-Fachtagung für Datenbanksysteme in Business, Technologie und Web (BTW)", Aachen, Germany, March 2007.

T. Rose is chairman of demonstration program at BTW 2007, Aachen.

M. Spaniol is a steering committee member of the MPEG-7/21 Community Conference/Workshop Series and is Publicity Co-Chair of the International Conference on Web-based Learning (ICWL) event series. He was member of the program committee of the IADIS Intl. Conf. on Web Based Communities 2007, the 6th MPEG-7/21 Community Workshop, ICWL'07, I-Know'07 special track KOST'06, M3A at I-Media'07, EC-TEL'07, SIRTEL 2007 at EC-TEL'07, and the Workshop „What is missing in Social Software? Current collaborative practices in social software" at ECSCW'07, i-TCE'08, M3R'08, IDET'08, and ICWL'08.

Software Demonstrations

· Virtual Campfire, the 9th Learning Management Congress, Berlin, Germany, June 20, 2008.
· Virtual Campfire, UMIC area B meeting, Aachen, Germany, June 17, 2008.
· Virtual Campfire, RWTH Transparent, Aachen, Germany, January 25, 2008.
· Virtual Campfire, Tag der Informatik 2007, Aachen, Germany, December 7, 2007.
· Virtual Campfire, UMIC Day 2007, Aachen, Germany, October 16, 2007.
· Virtual Campfire – A Mobile Social Software for Cross Media Communities, Workshop on Multimedia Metadata Applications (M3A) at Conference I-Media'07, Graz, Austria, September 5, 2007.
· GeRoMeSuite: A System for Holistic Generic Model Management, Tag der Informatik 2007, Aachen, Germany, December 7, 2007.
· Mobile Mining and Information Management in HealthNet Scenarios, the 9th International Conference on Mobile Data Management (MDM 2008), Beijing, China, April 29, 2008.
· GeRoMeSuite, 33rd International Conference on Very Large Data Bases (VLDB'07), Vienna, 2007.
· Mobile Mining and Information Management in HealthNet Scenario, Forum Gesundheitswirtschaft Region Aachen, AGIT Aachen, May 2008. · MobSOS and Mobile NMV of Virtual Campfire, the workshop on "Mobile and Contextualized Learning", Prolearn summer school, Ohrid, Macedonia, June 18, 2008.

Talks and Publications

Talks

T. Berlage: *Challenges and new solutions for data and image analysis*, The Application of Molecular and Cellular Imaging in Drug Discovery, Zurich, Switzerland, Oct. 18, 2007

T. Berlage: *Configurable image analysis for life science applications*, 2nd imaging in Drug Discovery, London, UK, Jan. 24, 2008

T. Berlage: *Schnelle Erkennung morphologischer Aberrationen durch Bilderkennungssysteme*, 28. Deutscher Krebskongress, Berlin, Feb. 21, 2008

E. Birk: *What Diagrams Contribute to Linguistic Discourse*, 5th Biannual European Conference of the SLSA: Figurations of Knowledge, Berlin, Jun. 4, 2008

Y. Cao: *Collaborative Storytelling in the Web 2.0*, the First International Workshop on Story-Telling and Educational Games (STEG'08) at EC-TEL 08, Maastricht, the Netherlands, September 16, 2008

Y. Cao: *Virtual Campfire*, The 9th Learning Management Congress, June 19-20, 2008, Berlin, Germany

Y. Cao: *Follow Me, Follow You – Spatiotemporal Community Context Modeling and Adaptation for Mobile Information Systems*, The 9th International Conference on Mobile Data Management, Beijing, China, April 27-30, 2008

Y. Cao: *Multimedia Community Information Systems Reload on Web 2.0*, Seminar talk at School of Computer Science and Mathematics, Victoria University, Melbourne, Australia, January 9, 2008

Y. Cao: *Media and Communities: Concepts and Systems*, Invited colloquium talk at Department of Computer Science, Hong Kong Baptist University, Hong Kong, China, December 18, 2007

Y. Cao: *Media Shape/Change Community!?*, 16th CIDOC CRM SIG Meeting, Nuremberg, Germany, December 5, 2007

Y. Cao: *Mobile Social Software with Context Awareness and Data Uncertainty Handling for Technology-Enhanced Learning*, The 2nd Prolearn Doctoral Consortium in Technology Enhanced Learning (EC-TEL 2007), Crete, Greece, September 2007

Y. Cao and M. Krebs: *Mobile Community Information Systems on Wireless Mesh Networks – An Opportunity for Developing Countries and Rural Areas*, 5th International Workshop on Ubiquitous Mobile Information and Collaboration Systems (UMICS 2007), CAiSE'07 workshop, Trondheim, Norway, June 11-12, 2007

Y. Cao and Z.Petrushyna: *Getting to "Know" People on the Web 2.0*, International Conference on New Media Technology, Special Track on Cross-Platform Aspects of the Social Web (CPASW '08), Graz, Austria, September 3, 2008

Y. Cao: *A Toolkit to Support Dynamic Social Network Visualization*, The 9th International Conference on Visual Information Systems, Shanghai, China, June 28-29, 2007

Y. Cao: *The Mobile Interfaces for Geo-hypermedia Databases*, On the Move to Meaningful Internet Systems 2007: OTM 2007 Workshop MONET, Vilamoura, Portugal, November 2007

Y. Cao: *Spatiotemporal Knowledge Visualization and Discovery in Dynamic Social Networks*, 7th International Conference on Knowledge Management, Graz, Austria, Sept. 5-7, 2007

M.A. Chatti: *Towards Web 2.0-Driven Learning Environments*, 4th International Conference on Web Information Systems and Technolgies (WEBIST 2008), Funchal, Madeira, May 4-7, 2008

M.A. Chatti: *The Web 2.0 Driven SECI Model Based Learning Process*, 7th International Conference on Advanced Learning Technologies (ICALT 2007), Niigata, Japan, July 18-20, 2007

A. Glukhova and A. Hahne: *Non-linear Story-telling in a Mobile World*, International Conference on Knowledge Management and New Media Technology, Graz, Austria, September 4, 2008

A. Glukhova: *Community-aware Adaptive Systems*, Workshop on Use in Context: Zwischen Adaptivität und Anpassbarkeit in kontextbasierten Interaktionen at Informatik 2008, Munich, Germany, September 12, 2008

A. Glukhova: *Measuring Community Satisfaction across Gaming Communities*, International Workshop on Interactive Digital Entertainment Technologies (IDET 2008), Lanzhou, China, July 15-16, 2008

S. Hackenbracht: *Online Gaming as Tool for Career Development*, First International Workshop on Story-Telling and Educational Games (STEG'08) at EC-TEL 08, Maastricht, the Netherlands, September 16, 2008

M. Jarke: *Research Area B – Mobile Web Services and Applications*, UMIC Kickoff, Aachen, February 20, 2007

M. Jarke: *Serious Games – The Impact of Pervasive Gaming on Business*, Keynote Talk, Wirtschaftsinformatik 2007, Karlsruhe, February 28, 2007 (also: Colloquium Presentation, University of Freiburg, January 28, 2008)

M. Jarke: *Informatik als Mediator der Globalisierung*, Heidelberger Akademie der Wissenschaften, April 20, 2007

M. Jarke: *Requirements Evolution and Reflective Community Information Systems*, Panel on Requirements Evolution, NSF Design Requirements Workshop, Cleveland, Ohio, June 4, 2007

M. Jarke: *Requirements Challenges from New Technologies and Architectures*, NSF Design Requirements Workshop. Cleveland, Ohio, June 5, 2007

M. Jarke: *Fraunhofer-Institut für Angewandte Informatik FIT. Presentation on the Occasion of the visit of Minister Pinkwart to Fraunhofer Institute Center Birlinghoven Castle, June 28, 2007,*

M. Jarke: *Creating New Learning Experiences on a Global Scale – EC-TEL 07 Wrap-Up,* 2nd European Conf Technology-Enhanced Learning. Iraklion, Greece, September 23, 2007

M. Jarke: *IKT Management,* Modul im Executive MBA Technology Management, Aachen International Academy, October 1-5, 2007

M. Jarke: *Informatics and Innovation – The Fraunhofer ICT Group at the Junction Between Research and Innovation,* Invited Talk, European Computer Science Faculties Symposium (ECSS 07), Berlin, October 8, 2007

M. Jarke: *Mobile Web Service Applications,* UMIC Day, RWTH Aachen, October 16, 2007

M. Jarke: *Innovationsmotor Informatik in Zeiten von Offshoring und Fachkräftemangel,* Festvortrag 30 Jahre Informatik Hochschule Darmstadt, October 24, 2007

M. Jarke: *Rechtliche Rahmenbedingungen und technische Optimierungspotenziale kritischer Infrastrukturen,* Invited Talk, Europäischer Katastrophenschutzkongress, October 30, 2007

M. Jarke: *Informatik verändert Studium und Arbeitswelt: Sind Schule und Ausbildung darauf vorbereitet?,* Symposium 10 Jahre ECDL, Wissenschaftszentrum Bonn, December 18, 2007

M. Jarke: *Innovation durch Kooperation – Lübeck und das ABC,* Zukunft Hanse, B-IT Bonn, February 12, 2008

M. Jarke: *ICT at RWTH Aachen University – Research, Teaching, Innovation,* IDEA League ICT Meeting, Paris, March 10, 2008

M. Jarke: *Holistic engineering of highspeed mobile information and communication systems,* Invited Talk, UNISCON 2008, Klagenfurt, 24.4.2008 (also presented at GIBU 2008, Dagstuhl, March 17, 2008)

D. Kensche: *Transformation of Models in(to) a Generic Metamodel,* Datenbanksysteme in Business, Technologie und Web (BTW 2007), Aachen, Germany, March 6, 2007

M Jarke: *Technology support for web compliance, governance and evolution of social communities,* Dagstuhl Perspective Seminar on Virtual Games, Interactive Hosted Services, and User-Generated Content in Web 2.0, Schloss Dagstuhl, September 25, 2008

D. Kensche: *Generic Schema Mappings,* 26th International Conference on Conceptual Modeling (ER 2007), Auckland, New Zealand, November 6, 2007

R. Klamma: *Virtual Intercultural Campus: CUELC after 1 year + ?,* Joint Workshop FK 427/CUELC Aachen, August 27, 2008

R. Klamma: *Dynamic Network Analysis of Wikis,* I-Know'08 and I-Media'08, International Conferences on Knowledge Management and New Media Technology, Graz, Austria, September 3, 2008

R. Klamma and C. Haasler: *Wikis as Social Networks: Evolution and Dynamics,* 2nd SNA-KDD Workshop Social Network Mining and Analysis, August 24, 2008, Las Vegas, Nevada, USA

R. Klamma: *Handlungsmacht,* Invited Talk, Zentrum für Soziale Innovation, Vienna, Austria, January 25, 2008

R. Klamma: *Social Software und Community Informationssysteme,* Invited Talk, Institute of Psychology, University of Graz, Austria, December 6, 2008

R. Klamma: *Communities of Practice and Competence Management,* Professional Learning Facts 2007, Stuttgart, Germany, November 13, 2007

R. Klamma: *MPEG-7 Services in Community Engines,* Guest Lecture at KU Leuven, Leuven, Belgiu, October 26, 2007

R. Klamma: *What is happening in the long tail? Understanding Social Software,* ECSCW Workshop "What is missing in Social Software", Limerick, Irland, September 24, 2007

R. Klamma: *EC-TEL 2007 Opening Speech,* EC-TEL 2007, Crete, Greece, September 19, 2007

R. Klamma: *Social Software and Community Information Systems,* Invited Talk at SCOOP Workshop, Jacobs University, Bremen, August 30, 2007

R. Klamma: *An Introduction to Social Software,* Invited Talk at Online Conference "Learning Networks in Practice", May 8, 2007

R. Klamma: *A model for Social Software / Community Mining,* Keynote at Thematic Workshop Social Software, Ministry of Education, Vienna, Austria, March 2, 2007

R. Klamma and M. Spaniol: *Learning As a Service: A Web-Based Learning Framework for Communities of Professionals on the Web 2.0,* Conference ICWL 2007, Edinburgh, Scotland, August 16, 2007

E. Linz: *Mobilkommunikation: Agency und Neue Medien',* Lecture Series "Sprache – Medium – Medien", RWTH Aachen, January 22, 2007

C. Quix: *Generic Schema Merging,* 19th International Conference on Advanced Information Systems Engineering (CAiSE), Trondheim, Norway, June 2007

C. Quix: *Matching of Ontologies with XML Schema Using a Generic Metamodel,* 6th International Conference on Ontologies, DataBases, and Applications of Semantics (ODBASE), Vilamoura, Portugal, November 2007

Z. Petrushyna: *The Troll Under the Bridge: Data Management for Huge Web Science Mediabases,* Die 38. Jahrestagung der Gesellschaft für Informatik e.V. (GI), die INFORMATIK 2008, "Digitale sozaile Netze", Munich, Germany, September 12, 2008

Z. Petrushyna: *No Guru, No Method, No Teacher: Self-Observation and Self-Modelling of E-Learning Communities,* 3rd European Conference on Technology Enhanced Learning, EC-TEL 2008, Maastricht, The Netherlands, September 18, 2008

W. Prinz: *Kooperationsunterstützung und Web 2.0,* 8. Club Meeting Sharepoint Switzerland, Basel, Schweiz, October 24, 2007

W. Prinz: *Keynote: Do we need CSCW 2.0 to overcome our current communication problems?,* Pragmatic Web Conference 2008, Tilburg, NL, October 22-23, 2007

W. Prinz: *Tools und Frameworks für Unified Communications & Collaboration (UCC),* e-Collaboration Forum 2007, October 15-16, 2007

W. Prinz: *Keynote: E-Collaboration – die neue Welt interner und externer Zusammenarbeit im Unternehmen,* COMPUTERWOCHE Executive Program Collaboration, October 9, 2007

W. Prinz: *Computerspiele außerhalb des Computers: Pervasive Games,* 19. medienforum.nrw, Köln, June 20, 2007

W. Prinz: *Visualizing the Invisible,* Key-Note & Innovation Lecture, InnoTech 2007, Bayer Business Services, March 2007

W. Prinz: *Invited talk: Web 2.0 Anwendungen und Nutzen,* TEMA AG, Aachen, January, 2007

D. Renzel and M. Spaniol: *MobSOS – A Testbed for Mobile Multimedia Community Services,* 9th International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS '08), Klagenfurt, Austria, May 7-9, 2008

D. Renzel and M. Spaniol: *Community-Aware Semantic Multimedia Tagging - From Folksonomies to Commsonomies,* Workshop on Multimedia Metadata Applications (M3A) at Conference I-Media'07, Graz, Austria, September 5, 2007

D. Schmitz: *Requirements Engineering for Control Systems Development in Small and Medium-Sized Enterprises,* 16th IEEE Requirements Engineering Conference (RE08), Barcelona, Spain, September 10, 2008

D. Schmitz: *Telos: Representing Knowledge about Control Systems?,* 1st Int. Workshop on Managing Requirements Knowledge (MaRK), RE08 workshop, Barcelona, Spain, September 8, 2008

D. Schmitz and A. Roesli: *Modelling Actor Evolution in Agent-Based Simulations,* 1st Workshop on Organised Adaptation in Multi-Agent Systems (OAMAS 2008), AAMAS'08 workshop, Estoril, Portugal, May 13, 2008

D. Schmitz: *Modellbasierte Anforderungserfassung für softwarebasierte Regelungen,* Software Engineering 2008, Fachtagung des GI-Fachbereichs Softwaretechnik, München, February 22, 2008

D. Schmitz: *How to Model Inter-Organisational Networks to Enable Dynamic Analyses via Simulations,* 17th Workshop on Agent-Oriented Information Systems (AOIS 2007), CAiSE'07 workshop, Trondheim, Norway, June 11, 2007

S. Srirama: *Mobile Web Service Provisioning,* Graduiertenkolleg "Software für mobile Kommunikationssysteme", November 21, 2007

M. Spaniol: *Watching the Blogosphere: Knowledge Sharing in the Web 2.0,* Conference Weblogs and Social Media, Boulder, Colorado, USA, March 27, 2007

M. Spaniol: *Informatische Methoden zur Unterstützung von Transkription, Lokalisierung und Adressierung in kulturwissenschaftlichen Communities,* Informatik-Oberseminar, RWTH Aachen, Germany, August 6, 2007

M. Spaniol: *Web-Based Learning in Cultural Science Communities: Information System Support for Transcription, Localization and Addressing,* Invited Talk at Special ICWL Workshop 2007, Jinhua, China, August 28, 2007

M. Spaniol: *A Media Theoretical Approach to Technology Enhanced Learning in Non-technical Disciplines,* Conference EC-TEL 2007, Sissi, Greece, September 19, 2007

M. Spaniol: *Technology Enhanced Learning by Non-linear Multimedia Stories in Cultural Heritage Communities: "The Bamiyan Valley Case",* Invited Talk at Universidad Complutense, Madrid, Spain, November 29, 2007

Publications

Books and Edited Volumes

E. Duval, R. Klamma, M. Wolpers: *Creating New Learning Experiences on a Global Scale – Second European Conference on Technology Enhanced Learning, EC-TEL 2007, Crete, Greece, September 17-20, 2007, Proceedings,* Lecture Notes in Computer Science, Vol. 4753, Springer-Verlag

M. Jarke, K. Neunast (eds.): *Informatiktage 2007 – Fachwissenschaftlicher Informatik-Kongress,* 30.-31.3.2007, B-IT Bonn. GI Lecture Notes in Informatics, 2007

M. Jarke, T. Seidl, C. Quix, D. Kensche, S. Conrad, E. Rahm, R. Klamma, H. Kosch, M. Granitzer, S. Apel, M. Rosenmüller, G. Saake, O. Spinczyk (Hrsg.): *Datenbanksysteme in Business, Technologie und Web (BTW 2007) – Workshop Proceedings,* Mainz Verlag, Aachen, 2007

A. Kemper, H. Schöning, T. Rose, M. Jarke, T. Seidl, C. Quix, C. Brochhaus (Eds.): *Datenbanksysteme in Business, Technologie und Web (BTW 2007),* Proceedings 12. GI-Fachtagung des GI-Fachbereichs "Datenbanken und Informationssysteme", Lecture Notes in Informatics, Nr. 103, Köllen-Verlag, Aachen, 2007

R. Klamma, N. Sharda, B. Fernández-Manjón, H. Kosch, M. Spaniol (Eds.): *Proceedings of the First International Workshop on Story-Telling and Educational Games (STEG'08) at EC-TEL 08,* Sep. 16, 2008, Maastricht, the Netherlands, CEUR-WS.org, 2008

M. Lux, M. Granitzer, M. Spaniol: *Multimedia Semantics – The Role of Metadata,* Springer, Berlin Heidelberg, ISBN 978-3-540-77472-3, 2008

K. Maillet, T. Klobucar, D. Gillet, R. Klamma: *EC-TEL 2007 PROLEARN Doctoral Consortium,* Proceedings of the EC-TEL 2007 PROLEARN Doctoral Consortium, Crete, Greece, September 18, 2007, CEUR-WS.org Vol. 288

M. Miatidis: *Integrated Experience-Based Support of Cooperative Engineering Design Processes,* Dissertation, RWTH Aachen, 2007

K. E. Nayo: *Monitoring-Datenbank-Konzepte für Kreditinstitute in der Dritten Welt am Beispiel Togo,* Dissertation, RWTH Aachen, 2008

G. Peinel: *Planung und Umsetzung von Geschäftsmodellen für eGovernmentdienste in Public Privat Partnerships,* Dissertation, RWTH Aachen, 2008, Fraunhofer series in information and communication technology (to appear)

M. Sedlmayr: *Proaktive Assistenz zur kontextabhängigen und zielorientierten Unterstützung bei der Indikationsstellung und Anwendung von Behandlungsmaßnahmen in der Intensivmedizin,* Dissertation, RWTH Aachen, 2008, Fraunhofer series in information and communication technology (to appear)

C. Seeling: *MultiView-Systeme zur explorativen Analyse unstrukturierter Information,* Dissertation, RWTH Aachen, 2007, Fraunhofer series in information and communication technology, 2007,3

M. Spaniol: *Informatische Methoden zur Unterstützung von Transkription, Lokalisierung und Adressierung in kulturwissenschaftlichen Communities,* Dissertation, RWTH Aachen, 2007

M. Wolpers, R. Klamma, E. Duval: *EC-TEL 2007 Posters,* Proceedings of the EC-TEL 2007 Poster Session, Crete, Greece, September 17-20, 2007, CEUR-WS.org Vol. 280

A. Zimmermann: *Context Management and Personalisation: A Tool Suite for Context- and User-Aware Computing,* Dissertation, RWTH Aachen, 2007, Fraunhofer series in information and communication technology, 2007, 2

Journal Articles

S.C. Brandt, J. Morbach, M. Miatidis, M. Theißen, M. Jarke, W. Marquardt: *An ontology-based approach to knowledge management in design processes,* Computers and Chemical Engineering 32, 1-2 (2008): 320-342

Y. Cao, A. Glukhova, R. Klamma, Z. Petrushyna: *Getting to "Know" People on the Web 2.0,* K. Tochtermann et. al. (Eds.): Proceedings of I-Know'08 and I-Media'08, International Conferences on Knowledge Management and New Media Technology, Graz, Austria, September 3-5, 2008, Journal of Universal Computer Science (J.UCS), pp.169-176, 2008

Y. Cao, M. Spaniol, R. Klamma, D. Renzel: *Virtual Campfire – A Mobile Social Software for Cross-Media Communities,* K. Tochtermann, H. Maurer, F. Kappe, A. Scharl (Eds.): Proceedings of I-Media'07, International Conference on New Media Technology and Semantic Systems, Graz, Austria, September 5 – 7, 2007, J.UCS (Journal of Universal Computer Science) Proceedings, pp. 192-195, 2007

M.A. Chatti, M. Jarke, D. Frosch-Wilke: *The future of e-learning: a shift to knowledge networking and social software,* Int. J. Knowledge and Learning, Vol. 3, Nos. 4/5, 2007

M. Jarke: *Informatikjahr 2006 – Ein Fazit,* Informatik-Spektrum 30, Nr. 2, S. 59-67, 2007

M. Jarke: *Serious Games: The Impact of Pervasive Gaming on Business,* Wirtschaftsinformatik (1) 2007: 15-16

M. Jarke: *Was bleibt vom Informatikjahr?,* it – Information Technology 49, 3, S. 206-208, 2007

M. Jarke, M. Warnke: *Informatik und die Geisteswissenschaften,* Informatik Spektrum 31, 1, S. 1-3, 2008

L. Jäger, M. Jarke, R. Klamma, M. Spaniol: *Transkriptivität: Operative Medientheorien als Grundlage von Informationssystemen für die Kulturwissenschaften,* Informatik Spektrum, Vol. 31, No. 1, ISSN 0170-6012, Springer, Berlin Heidelberg, pp. 21-29, 2008

D. Kensche, C. Quix, M.A. Chatti, M. Jarke: *GeRoMe: A Generic Role Based Metamodel for Model Management,* Journal on Data Semantics, Vol. VIII, LNCS 4380, pp. 82-117, Springer-Verlag, 2007

R. Klamma, Y. Cao, A. Glukhova, A. Hahne, D. Renzel: *Non-linear Story-telling in a Mobile World,* K. Tochtermann et al. (Eds.): Proceedings of I-Know'08 and I-Media'08, International Conferences on Knowledge Management and New Media Technology, Graz, Austria, September 3-5, 2008, Journal of Universal Computer Science (J.UCS), pp. 218-225

R. Klamma, Y. Cao, M. Spaniol, Y. Leng: *Spatiotemporal Knowledge Visualization and Discovery in Dynamic Social Networks,* K. Tochtermann, H. Maurer (eds.): Proceedings of I-KNOW 07, 7th International Conference on Knowledge Management, Graz, Austria, Sept. 5-7, 2007, J.UCS (Journal of Universal Computer Science) Proceedings, pp. 384-391

R. Klamma, M. A. Chatti, E. Duval, H. Hummel, E. T. Hvannberg, M. Kravcik, E. Law, A. Naeve, P. Scott: *Social Software for Life-long Learning,* Journal of Educational Technology & Society, 10(3):72-83, 2007

R. Klamma, C. Haasler: *Dynamic Network Analysis of Wikis,* K. Tochtermann et al. (Eds.): Proceedings of I-Know'08 and I-Media'08, International Conferences on Knowledge Management and New Media Technology, Graz, Austria, September 3-5, 2008, Journal of Universal Computer Science (J.UCS), pp.161-168

R. Klamma, M. Jarke: *Software social móvil en comunidades profesionales,* Novatica, no. 193, May-June, pp. 30-34, 2008; *Mobile Social Software for Professional Communities,* UPGRADE, Vol. IX, issue No. 3, June 2008, pp.37-43

R. Klamma, M. Spaniol, D. Renzel: *Community-Aware Semantic Multimedia Tagging – From Folksonomies to Commsonomies,* K. Tochtermann, H. Maurer, F. Kappe, A.

Scharl (Eds.): Proceedings of I-Media'07, International Conference on New Media Technology and Semantic Systems, Graz, Austria, September 5 – 7, 2007, J.UCS (Journal of Universal Computer Science) Proceedings, pp.163-171, 2007

M. Linek, M. Jungmann, T. Berlage, M. Pechnig, C. Clauser: *Rock classification based on resistivity patterns in electrical borehole wall images,* Journal of Geophysics and Engineering 4, 2 (2007), pp. 171–183

C. Quix, D. Kensche, X. Li: *GeRoMeSuite: Ein System für generisches Model Management,* Datenbank-Spektrum, Nr. 24, pp. 4-11, dpunkt.verlag, 2008

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