# Table of Contents

## Session I: Adaptation – Separation of Concerns

Towards a Framework for Self-adaptive Component-Based Applications  
*Pierre-Charles David and Thomas Ledoux*  
(*Ecole des Mines de Nantes, France*)  

A Scheme for the Introduction of 3rd Party, Application-Specific Adaptation Features in Mobile Service Provision  
*Nikos Houssos, Nancy Alonistioti, and Lazaros Merakos*  
(*University of Athens, Greece*)  

Brenda: Towards a Composition Framework for Non-orthogonal Non-functional Properties  
*Mikaël Beauvois*  
(*France Télécom R&D, France*)  

Meta-programming Middleware for Distributed Object Computing  
*(Short Paper)*  
*Peter Breitling*  
(*Technische Universität München, Germany*)  

## Session II: Deployment

Middleware Support for Resource-Constrained Software Deployment  
*Nicolas Le Sommer and Frédéric Guidec*  
(*University of South Brittany, France*)  

Rational Server Selection for Mobile Agents  
*Carsten Pils and Stefan Diepolder*  
(*RWTH Aachen, Germany*)  

Facilitating the Portability of User Applications in Grid Environments  
*Paul Z. Kolano*  
(*NASA Ames Research Center, USA*)  

Negotiation as a Generic Component Coordination Primitive  
*Jean Marc Andreoli and Stefania Castellani*  
(*Xerox Research Centre Europe, France*)  

## Session III: Security – Transactions

Jironde: A Flexible Framework for Making Components Transactional  
*Marek Prochazka*  
(*INRIA Rhône-Alpes, France*)  

*Gustavo A. Santana Torrellas*  
(*Instituto Mexicano del Petróleo, Mexico*)
Middleware Support for Non-repudiable Transactional Information Sharing between Enterprises *(Short Paper)* .................................................. 125

*Nick Cook, Santosh Shrivastava, and Stuart Wheater (University of Newcastle, UK)*

Adaptable Access Control Policies for Medical Information Systems *(Short Paper)* ................................................................. 133

*Tine Verhanneman, Liesbeth Jaco, Bart De Win, Frank Piessens, and Wouter Joosen (Katholieke Universiteit Leuven, Belgium)*

**Session IV: Replication**

Client-Side Component Caching: A Flexible Mechanism for Optimized Component Attribute Caching ........................................... 141

*Christoph Pohl and Alexander Schill (Technische Universität Dresden, Germany)*

A Variable Cache Consistency Protocol for Mobile Systems Using Time Locks .................................................................................. 153

*Abhinav Vora, Zahir Tari, and Peter Bertok (RMIT University, Australia)*

DataWarp: Building Applications Which Make Progress in an Inconsistent World ................................................................. 167

*Peter Henderson, Robert John Walters, Stephen Crouch, and Qinglai Ni (University of Southampton, UK)*

Hand-Over Video Cache Policy for Mobile Users *(Short Paper)* .......... 179

*Damien Charlet, Pascal Chatonnay, and François Spies (Université de Franche-Comté, France)*

**Session V: Networking and Routing**

Planning for Network-Aware Paths ................................................... 187

*Xiaodong Fu and Vijay Karamcheti (New York University, USA)*

Integrating the Unreliable Multicast Inter-ORB Protocol in MJACO .... 200

*Alysson Neves Bessani (Universidade Federal de Santa Catarina, Brazil),
Lau Cheuk Lung (Pontifical Catholic University of Paraná, Brazil),
Joni da Silva Praga (Universidade Federal de Santa Catarina, Brazil),
and Alcides Calsavara (Pontifical Catholic University of Paraná)*

A-GATE: A System of Relay and Translation Gateways for Communication among Heterogeneous Agents in Ad Hoc Wireless Environments ..................................................... 212

*Leelani Kumari Wickramasinghe, Seng Wai Loke, Arkady Zaslavsky,
and Damminda Alahakoon (Monash University, Australia)*
Session VI: Discovery — Context-Awareness — Ontology

Scalable Location Management for Context-Aware Systems .................. 224
  Jadwiga Indulska, Ted McFadden, Matthias Kind,
  and Karen Henricksen (University of Queensland, Australia)

CoOL: A Context Ontology Language to Enable Contextual Interoperability .................................................. 236
  Thomas Strang (Deutsche Aerospace Center, Germany),
  Claudia Linnhoff-Popien, and Korbinian Frank
  (Ludwig-Maximilians-University Munich, Germany)

Discovering Web Services Using Behavioural Constraints and Ontology ... 248
  Natenapa Sriharee and Twittie Senivongse
  (Chulalongkorn University, Thailand)

Requirements for Personal Information Agents in the Semantic Web
(Short Paper) .............................................................................. 260
  Wolfgang Woerndl (Technische Universität München, Germany)

Towards an Intuitive Interface for Tailored Service Compositions
(Short Paper) .............................................................................. 266
  Steffen Higel, Tony O’Donnell, Dave Lewis, and Vincent Wade
  (Trinity College Dublin, Ireland)

Session VII: Asynchronous Messaging

Context-Based Addressing: The Concept and an Implementation
for Large-Scale Mobile Agent Systems
Using Publish-Subscribe Event Notification ..................................... 274
  Seng Wai Loke, Amir Padovitz, and Arkady Zaslavsky
  (Monash University, Australia)

Exploiting Proximity in Event-Based Middleware
for Collaborative Mobile Applications ........................................... 285
  René Meier and Vinny Cahill (Trinity College Dublin, Ireland)

A Flexible Middleware Layer for User-to-User Messaging .................. 297
  Jan-Mark S. Wams and Maarten van Steen
  (Vrije Universiteit Amsterdam, The Netherlands)

Author Index .............................................................................. 311