

# Table of Contents

## Invited Paper

Middleware and Web Services for the Collaborative Information Portal of NASA's Mars Exploration Rovers Mission . . . . .	1
<i>Elias Sinderson, Vish Magapu, and Ronald Mak</i>	

## Peer-to-Peer Computing

A Content Model for Evaluating Peer-to-Peer Searching Techniques . . . . .	18
<i>Brian F. Cooper</i>	
Foreseer: A Novel, Locality-Aware Peer-to-Peer System Architecture for Keyword Searches . . . . .	38
<i>Hailong Cai and Jun Wang</i>	
Guiding Queries to Information Sources with InfoBeacons . . . . .	59
<i>Brian F. Cooper</i>	

## Routing Protocols and Overlays

The Peer Sampling Service: Experimental Evaluation of Unstructured Gossip-Based Implementations . . . . .	79
<i>Márk Jelasity, Rachid Guerraoui, Anne-Marie Kermarrec, and Maarten van Steen</i>	
Directed Flood-Routing Framework for Wireless Sensor Networks . . . . .	99
<i>Miklós Maróti</i>	
On Exploring Performance Optimizations in Web Service Composition . . .	115
<i>Jingwen Jin and Klara Nahrstedt</i>	
<i>iOverlay</i> : A Lightweight Middleware Infrastructure for Overlay Application Implementations . . . . .	135
<i>Baochun Li, Jiang Guo, and Mea Wang</i>	

## Middleware for Replication and Transactions

Ganymed: Scalable Replication for Transactional Web Applications . . . . .	155
<i>Christian Plattner and Gustavo Alonso</i>	

## XIV Table of Contents

Adaptive Middleware for Data Replication . . . . .	175
<i>Jesús M. Milan-Franco, Ricardo Jiménez-Peris, Marta Patiño-Martínez, and Bettina Kemme</i>	
Alternative Edge-Server Architectures for Enterprise JavaBeans Applications . . . . .	195
<i>Avraham Leff and James T. Rayfield</i>	
Transparent Information Dissemination . . . . .	212
<i>Amol Nayate, Mike Dahlin, and Arun Iyengar</i>	

## Publish/Subscribe

An Ontology-Based Publish/Subscribe System . . . . .	232
<i>Jinling Wang, Beihong Jin, and Jing Li</i>	
Meghdoot: Content-Based Publish/Subscribe over P2P Networks . . . . .	254
<i>Abhishek Gupta, Ozgur D. Sahin, Divyakant Agrawal, and Amr El Abbadi</i>	
Subscription Propagation in Highly-Available Publish/Subscribe Middleware . . . . .	274
<i>Yuanyuan Zhao, Daniel Sturman, and Sumeer Bhola</i>	

## Web Services:

### Composition, Integration and Interoperability

Composition of Coordinated Web Services . . . . .	294
<i>Stefan Tai, Rania Khalaf, and Thomas Mikalsen</i>	
Adaptive Resource Sharing in a Web Services Environment . . . . .	311
<i>Vijay K. Naik, Swaminathan Sivasubramanian, and Sriram Krishnan</i>	
Interoperability Among Independently Evolving Web Services . . . . .	331
<i>Shankar R. Ponnekanti and Armando Fox</i>	

## Middleware for Mobility

SyD: A Middleware Testbed for Collaborative Applications over Small Heterogeneous Devices and Data Stores . . . . .	352
<i>Sushil K. Prasad, Vijay Madiseti, Shamkant B. Navathe, Raj Sunderraman, Erdogan Dogdu, Anu Bourgeois, Michael Weeks, Bing Liu, Janaka Balasooriya, Arthi Hariharan, Wanxia Xie, Praveen Madiraju, Srilaxmi Malladi, Raghupathy Sivakumar, Alex Zelikovsky, Yanqing Zhang, Yi Pan, and Saied Belkasim</i>	

Dynamically Programmable and Reconfigurable Middleware Services . . . .	372
<i>Manuel Roman and Nayeem Islam</i>	
MiddleWhere: A Middleware for Location Awareness in Ubiquitous Computing Applications . . . . .	397
<i>Anand Ranganathan, Jalal Al-Muhtadi, Shiva Chetan, Roy Campbell, and M. Dennis Mickunas</i>	
A Game Theoretic Approach for Power Aware Middleware . . . . .	417
<i>Shivajit Mohapatra and Nalini Venkatasubramanian</i>	

## **Application Servers, Enterprise Computing, and Software Engineering**

Extending a J2EE™ Server with Dynamic and Flexible Resource Management . . . . .	439
<i>Mick Jordan, Grzegorz Czajkowski, Kirill Kouklinski, and Glenn Skinner</i>	
Developing and Managing Software Components in an Ontology-Based Application Server . . . . .	459
<i>Daniel Oberle, Andreas Eberhart, Steffen Staab, and Raphael Volz</i>	
Portable and Efficient Distributed Threads for Java . . . . .	478
<i>Eli Tilevich and Yannis Smaragdakis</i>	
Platform Independent Model Transformation Based on TRIPLE . . . . .	493
<i>Andreas Billig, Susanne Busse, Andreas Leicher, and Jörn Guy Süß</i>	
<b>Author Index . . . . .</b>	<b>513</b>

Middleware 2004

ACM/IFIP/USENIX International Middleware Conference,  
Toronto, Canada, October 18-20, 2004, Proceedings

Jacobsen, H.-A. (Ed.)

2004, XVI, 520 p., Softcover

ISBN: 978-3-540-23428-9