

Proceedings

12th IEEE International Workshop on Future Trends of Distributed Computing Systems

*Kunming, China
October 21-23, 2008*

Sponsored by IEEE Computer Society Technical Committee
on Distributed Processing



Los Alamitos, California
Washington • Tokyo



Table of Contents

12th IEEE International Workshop on Future Trends of Distributed Computing Systems

Message from the Steering Committee Chair	ix
Message from the Workshop Co-Chairs	x
Message from the Program Co-Chairs	xi
FTDCS 2008 Committees	xii
Reviewers	xiv

Plenary Panel Session A

Grand Challenges in Distributed Computing Systems	3
<i>Chair: Stephen S. Yau, Arizona State University, USA</i>	
<i>Panelists: Eliza Bertino, Purdue University, USA,</i>	
<i>Lionel Ni, Hong Kong University of Science and Technology, China</i>	
<i>Radu Pospescu-Zeletin, Technical University of Berlin, Germany,</i>	
<i>Liang-Jie Zhang, IBM Research Center, USA</i>	

Session 1: Wireless and Mobile Ad Hoc Networks

Energy Efficient Detections of Critical Events in Wireless Sensor Networks.....	4
<i>Yunhuai Liu, Yanmin Zhu, and Lionel Ni</i>	
Design and Evaluation of a Dynamic Continuous Media Streaming Supporting Method on the Basis of Logical Grid Hierarchy for MANETs.....	11
<i>Ihn-Han Bae and Kyung-Sook Lee</i>	
An Adaptive Polling Scheme Supporting Audio/Video Streaming in Wireless LANs	16
<i>Yaw-Chung Chen and Han-Ru Yeh</i>	

Session 2: Web Services and Service-Oriented Architecture (A)

Towards Role-Based Authorization for OSGi Service Environments.....	23
<i>Gail-Joon Ahn, Hongxin Hu, and Jing Jin</i>	
Performance Analysis of Service Composition Using Ordinary Differential Equations.....	30
<i>Zuohua Ding, Lujuan Xiao, and Jueliang Hu</i>	
The BCD View Model: Business Analysis View, Service Composition View and Service Design View for Service Oriented Software Design and Development.....	37
<i>Joonseok Park, Mikyeong Moon, and Keunhyuk Yeom</i>	

Session 3: Autonomic and Adaptive Systems

Event-Based Data Dissemination on Inter-Administrative Domains: Is it Viable?.....	44
<i>Roberto Baldoni, Leonardo Querzoni, and Sirio Scipioni</i>	
Human-Intention Driven Self Adaptive Software Evolvability in Distributed Service Environments.....	51
<i>Hua Ming, Katsunori Oyama, and Carl K. Chang</i>	
Why Moodle.....	58
<i>Ajlan Al-Ajlan and Hussein Zedan</i>	

Session 4: Web Services and Service-Oriented Architecture (B)

Distributed Scientific Workflow Management for Data-Intensive Applications.....	65
<i>S. Shumilov, Y. Leng, M. El-Gayyar, and A.B. Cremers</i>	
Developing Service-Based Software Systems with QoS Monitoring and Adaptation	74
<i>S.S. Yau, N. Ye, H. Sarjoughian, and D. Huang</i>	
Progressive Ripple-Based Service Discovery for High Response Time in Autonomous Decentralized Community System.....	81
<i>Khalid Mahmood, Yuji Horikoshi, Satoshi Niki, Xiaodong Lu, and Kinji Mori</i>	

Session 5: Grid Computing and Utility Computing

GSON: A Group Based Hierarchically Structured Overlay Network.....	88
<i>Rui Wang, Qinglin Zhu, Depei Qian, and Danfeng Zhu</i>	
A Credit Evaluation Model for Computational Grid Nodes.....	95
<i>Tao Wang, Xing-she Zhou, Yun-lan Wang, and Jian Hu</i>	
Design and Implementation of an Information Service for Cross-Grid Computing Environments.....	99
<i>Chao-Tung Yang, Tsui-Ting Chen, Keng-Yi Chou, and William C. Chu</i>	

Session 6: Web Services and Service-Oriented Architecture (C)

Developing a Security Robot in Service-Oriented Architecture.....	106
<i>Yinong Chen, S. Abhyankar, L. Xu, W.T. Tsai, and Marcos Garcia-Acosta</i>	
Structured Service Composition Execution for Mobile Web Applications	112
<i>Heiko Pfeiffer, Louay Bassbouss, and Stephan Steglich</i>	
SOV: Service Oriented Virtualization Model for Medical Image Grid.....	119
<i>Aobing Sun, Hai Jin, Qin Zhang, and Ran Zheng</i>	

Session 7: Dependable and Survivable Distributed Systems

Reliability Analysis of Component-Based Software Based on Rewrite Logic.....	126
<i>Dong Wang and Ning Huang</i>	
XMML: A Visual Metamodeling Language for Domain-Specific Modeling and its Application in Distributed Systems.....	133
<i>Hua Zhou, XingPing Sun, ZhiHong Liang, HongWei Kang, QingDuan, and Hongji Yang</i>	
The Causal Order is Strict.....	140
<i>Jeremiah James and Supratik Mukhopadhyay</i>	
An Extended MM-Path Approach to Component-Based Web Application Testing	144
<i>Jingxian Gu, Lei Xu, Baowen Xu, and Hongji Yang</i>	

Session 8: Security and Trust in Distributed Systems (A)

Towards a Simple Secured Searching Protocol for Future RFID Applications.....	151
<i>Md Sazzad Hossain and Sheikh Iqbal Ahamed</i>	
Using Historical Role to Speed up Subsequent Negotiations	158
<i>Yizhu Zhao and Hongwei Lu</i>	
A Delegation Framework for Access Control in WfMS Based on Tasks and Roles	165
<i>Pu Jian, Hwai-jung Hsu, and Feng-jian Wang</i>	
An Architecture for Guaranteeing Real-Time Databases Available Ceaselessly	172
<i>Ying-yuan Xiao</i>	

Session 9: Distributed Applications and Services

Well-Balanced Allocation Strategy for Multi-Cluster Computing Environments.....	178
<i>Chao-Tung Yang, Hao-Yu Tung, Keng-Yi Chou, and William C. Chu</i>	
A Distributed Approach for Multi-Domain Simulation of Mechatronic Systems	185
<i>Tibor Farkas, Andreas Hinnerichs, and Carsten Neumann</i>	
Cognitive Distributed Networks in Environmental e-Science.....	192
<i>Ramesh Bharadwaj, Supratik Mukhopadhyay, Manuel Peralta, Krishna Shenai, and Subhashis Majumder</i>	

Session 10: Security and Trust in Distributed Systems (B)

Approach to Supporting Continuity of Usage in Location-Based Access Control.....	199
<i>Maria Luisa Damiani, Elisa Bertino, and Claudio Silvestri</i>	
Intrusion Detection Using Third-Parties Support	206
<i>Masakazu Fujii, Kenichi Takahashi, Yoshiaki Hori, and Kouichi Sakurai</i>	
Using Multi-Core Processors to Support Network Security Applications.....	213
<i>Yang Xiang and Wanlei Zhou</i>	

Session 11: Real-time, Pervasive and Embedded Systems

ERAP: ECC Based RFID Authentication Protocol	219
<i>Sheikh Iqbal Ahamed, Farzana Rahman, and Endadul Hoque</i>	
BlueCRM: A New Trend of Customer Relationship Management Systems	226
<i>Mohammed Alawairdhi, Hongji Yang, and Mousa Al-Akhras</i>	
APRIX: A Master-Slave Operating System Architecture for Multiprocessor Embedded Systems	233
<i>Jimin Kim and Minsoo Ryu</i>	

Plenary Panel Session B

Future Trends of Distributed Computing Systems	238
<i>Chair: Hongji Yang, De Montefort University, UK</i>	
<i>Panelists: Carl Chang, Iowa State University, USA</i>	
<i>William Chu, TungHai University, Taiwan</i>	
<i>Kinji Mori, Tokyo Institute of Technology, Japan</i>	
<i>Serge Shamilov, University of Berlin, Germany</i>	

Author Index	239
---------------------------	-----