

LNCS 3292

Robert Meersman

Zahir Tari

Angelo Corsaro et al. (Eds.)

On the Move to Meaningful Internet Systems 2004: OTM 2004 Workshops

OTM Confederated International Workshops and Posters
GADA, JTRES, MIOS, WORM, WOSE, PhDS, and INTEROP 2004
Agia Napa, Cyprus, October 2004, Proceedings



DOA



Robert Meersman Zahir Tari Angelo Corsaro
Pilar Herrero María S. Pérez Milena Radenkovic
Victor Robles Corrado Santoro Antonia Albani
Klaus Turowski Mustafa Jarrar Aldo Gangemi
Erik Duval Peter Spyns Alexios Palinginis (Eds.)

On the Move to Meaningful Internet Systems 2004: OTM 2004 Workshops

OTM Confederated International Workshops and Posters
GADA, JTRES, MIOS, WORM, WOSE, PhDS, and INTEROP 2004
Agia Napa, Cyprus, October 25-29, 2004
Proceedings

Volume Editors

Robert Meersman
Vrije Universiteit Brussel, STAR Lab
Pleinlaan 2, Bldg. G/10, 1050 Brussels, Belgium
E-mail: meersman@vub.ac.be

Zahir Tari
RMIT University, School of Computer Science and IT
City Campus, GPO Box 2476 V, Melbourne, Victoria 3001, Australia
E-mail: zahirt@cs.rmit.edu.au

Angelo Corsaro
Alenia Marconi Systems
Via Tiburtina Km 12.400, 00131 Rome, Italy
E-mail: acorsaro@amsjv.it

Library of Congress Control Number: 2004113941

CR Subject Classification (1998): H.2, H.3, H.4, C.2, H.5, I.2, D.2, K.4

ISSN 0302-9743

ISBN 3-540-23664-3 Springer Berlin Heidelberg New York

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

Springer is a part of Springer Science+Business Media
springeronline.com

© Springer-Verlag Berlin Heidelberg 2004
Printed in Germany

Typesetting: Camera-ready by author, data conversion by PTP-Berlin, Protago-TeX-Production GmbH
Printed on acid-free paper SPIN: 11340553 06/3142 5 4 3 2 1 0

Commenced Publication in 1973

Founding and Former Series Editors:

Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

Editorial Board

David Hutchison

Lancaster University, UK

Takeo Kanade

Carnegie Mellon University, Pittsburgh, PA, USA

Josef Kittler

University of Surrey, Guildford, UK

Jon M. Kleinberg

Cornell University, Ithaca, NY, USA

Friedemann Mattern

ETH Zurich, Switzerland

John C. Mitchell

Stanford University, CA, USA

Moni Naor

Weizmann Institute of Science, Rehovot, Israel

Oscar Nierstrasz

University of Bern, Switzerland

C. Pandu Rangan

Indian Institute of Technology, Madras, India

Bernhard Steffen

University of Dortmund, Germany

Madhu Sudan

Massachusetts Institute of Technology, MA, USA

Demetri Terzopoulos

New York University, NY, USA

Doug Tygar

University of California, Berkeley, CA, USA

Moshe Y. Vardi

Rice University, Houston, TX, USA

Gerhard Weikum

Max-Planck Institute of Computer Science, Saarbruecken, Germany

GADA

Pilar Herrero
María S. Pérez
Milena Radenkovic
Victor Robles

JTRES

Angelo Corsaro
Corrado Santoro

MIOS

Antonia Albani
Klaus Turowski

WORM

Mustafa Jarrar
Aldo Gangemi

WOSE

Erik Duval
Peter Spyns

PhDS

Peter Spyns
Antonia Albani
Alexios Palinginis

INTEROP

Hervé Panetto
Monica Scannapieco
Martin Zelm

OTM 2004 General Co-chairs' Message

The General Chairs of OnTheMove 2004, Larnaca, Cyprus, are once more proud to observe that the conference series we started in Irvine, California in 2002, and continued in Catania, Sicily last year, has turned out to be a concept that attracts a representative selection of today's research in distributed, heterogeneous yet collaborative systems, of which the Internet and the WWW are its prime examples.

Indeed, as such large, complex and networked intelligent information systems become the focus and norm for computing, it is clear that one needs to address and discuss in a single forum the implied software and system issues as well as methodological, theoretical and application issues. This is why the OnTheMove (OTM) Federated Conferences series covers an increasingly wide yet closely knit range of topics such as data and Web semantics, distributed objects, Web services, databases, workflows, cooperation, ubiquity, interoperability, and mobility. OnTheMove wants to be a primary scientific forum where these aspects for the development of internet- and intranet-based systems in organizations and for e-business are addressed in a quality-controlled fundamental way. This third, 2004 edition of the OTM Federated Conferences event therefore again provided an opportunity for researchers and practitioners to understand and publish these developments within their respective as well as within their broader contexts.

OTM first of all co-locates three related, complementary and successful main conference series: DOA (Distributed Objects and Applications), covering the relevant infrastructure-enabling technologies, ODBASE (Ontologies, DataBases and Applications of SEmanantics) covering Web semantics, XML databases and ontologies, and CoopIS (Cooperative Information Systems) covering the application of these technologies in an enterprise context through, for example, workflow systems and knowledge management. Each of these three conferences treats its specific topics within a framework of (a) theory, (b) conceptual design and development, and (c) applications, in particular case studies and industrial solutions.

Following and expanding the example set in 2003, we solicited and selected quality workshop proposals to complement the more "archival" nature of the main conferences, with research results in a number of selected and more "avant garde" areas related to the general topic of distributed computing. For instance, the so-called Semantic Web has given rise to several novel research areas combining linguistics, information systems technology, and artificial intelligence, such as the modeling of (legal) regulatory systems and the ubiquitous nature of their usage. We were glad to see that in 2004 several of the Catania workshops re-emerged with a second edition (notably WoRM and JTRES), and that four other workshops could be hosted and successfully organized by their respective proposers: GADA, MOIS, WOSE, and INTEROP. We trust that their audiences mutually productively and happily mingled with those of the main conferences.

A special mention for 2004 is in order for the new Doctoral Symposium Workshop where three young postdoc researchers organized an original setup and formula to bring PhD students together and allow them to submit their research proposals for selection. A limited number of the submissions and their approaches were independently evaluated by a panel of senior experts at the conference, and presented by the students in front of a wider audience. These students also got free access to all other parts of the OTM program, and only paid a heavily discounted fee for the Doctoral Symposium itself. (In fact their attendance was largely sponsored by the other participants!) If evaluated as successful, it is the intention of the General Chairs to expand this model in future editions of the OTM conferences and so draw in an audience of young researchers to the OnTheMove forum.

All three main conferences and the associated workshops share the distributed aspects of modern computing systems, and the resulting application-pull created by the Internet and the so-called Semantic Web. For DOA 2004, the primary emphasis stayed on the distributed object infrastructure; for ODBASE 2004, it was the knowledge bases and methods required for enabling the use of formal semantics; and for CoopIS 2004 the main topic was the interaction of such technologies and methods with management issues, such as occurs in networked organizations. These subject areas naturally overlap and many submissions in fact also treat envisaged mutual impacts among them. As for the earlier editions, the organizers wanted to stimulate this cross-pollination with a shared program of famous keynote speakers: this year we got no less than Roberto Cencioni of the EC, Umesh Dayal of HP Labs, Hans Gellersen of Lancaster University, and Nicola Guarino of the Italian CNR! As before we encouraged multiple-event attendance by providing authors with free access to other conferences or workshops of their choice.

We received a total of 350 submissions for the three conferences and approximately 170 in total for the workshops. Not only can we therefore again claim success in attracting a representative volume of scientific papers, but such a harvest allowed the program committees of course to compose a high-quality cross-section of worldwide research in the areas covered. In spite of the large number of submissions, the Program Chairs of each of the three main conferences decided to accept only approximately the same number of papers for presentation and publication as in 2002 and 2003 (i.e., an average of 1 paper out of 4 submitted, not counting posters). For the workshops, the acceptance rate varied but was stricter than before, about 1 in 2, to 1 in 3 for GADA and WoRM. Also, for this reason, we decided to separate the proceedings into two books with their own titles, with the main proceedings in two volumes and the workshop proceedings in a separate, third volume, and we are grateful to Springer for their suggestions and collaboration in producing these books. The reviewing process by the respective program committees as usual was performed very professionally and each paper in the main conferences was reviewed by at least three referees. It may be worthwhile to emphasize that it is an explicit OnTheMove policy that all conference program committees and chairs make their selections completely

autonomously from the OTM organization. Continuing an equally nice (but admittedly costly) tradition, the OnTheMove Federated Event organizers decided again to make ALL (sizeable!) proceedings available to ALL participants of conferences and workshops, independent of their registrations.

The General Chairs really are especially grateful to all the many people who were directly or indirectly involved in the setup of these federated conferences and in doing so made them a success. Few people realize what a large number of people have to be involved, and what a huge amount of work, and, yes, risk organizing an event like OTM entails. In particular we therefore thank our eight main conference PC co-chairs (DOA 2004: Vinny Cahill, Steve Vinoski, and Werner Vogels; ODBASE 2004: Tiziana Catarci and Katia Sycara; CoopIS 2004: Wil van der Aalst, Christoph Bussler, and Avigdor Gal) and our 15 workshop PC co-chairs (Angelo Corsaro, Corrado Santoro, Mustafa Jarrar, Aldo Gangemi, Klaus Turowski, Antonia Albani [2x], Alexios Palinginis, Peter Spyns [2x], Erik Duval, Pilar Herrero, Maria S. Perez, Monica Scannapieco, Paola Velardi, Herve Panetto, Martin Zelm) who, together with their many PC members, did a superb and professional job in selecting the best papers from the large harvest of submissions. We also thank our Publicity Chair (Laura Bright) and Publication Chair (Kwong Yuen Lai), and of course our overall Workshops Chair (Angelo Corsaro).

We do hope that the results of this federated scientific event contribute to your research and your place in the scientific network. We look forward to seeing you at next year's edition!

August 2004

Robert Meersman, Vrije Universiteit Brussel, Belgium
Zahir Tari, RMIT University, Australia

Organization Committee

The OTM (On The Move) 2004 Federated Workshops, involving six workshops (i.e., GADA – Workshop on Grid Computing and Its Application to Data Analysis, JTRES – Workshop on Java Technologies for Real-Time and Embedded Systems, MIOS – Workshop on Modeling Inter-organizational Systems, WORM – Workshop on Regulatory Ontologies, WOSE – Workshop on Ontologies, Semantics, and E-Learning, PhDS – PhD Symposium, and INTEROP – INTEROP NoE Dissemination Workshop), were proudly supported by RMIT University and Vrije Universiteit Brussel.

Executive Committee

OTM 2004 General Co-chairs	Robert Meersman (Vrije Universiteit Brussel) and Zahir Tari (RMIT University)
GADA 2004 PC Co-chairs	Pilar Herrero (Universidad Politecnica de Madrid), María S. Pérez (Universidad Politécnica de Madrid), Milena Radenkovic (University of Nottingham), and Victor Robles (Universidad Politecnica de Madrid)
JTRES 2004 PC Co-chairs	Angelo Corsaro (Washington University), Corrado Santoro (University of Catania)
MIOS 2004 PC Co-chairs	Antonia Albani (University of Augsburg) and Klaus Turowski (University of Augsburg)
WORM 2004 PC Co-chairs	Mustafa Jarrar (Vrije Universiteit Brussel) and Aldo Gangemi (ISTC-CNR)
WOSE 2004 PC Co-chairs	Erik Duval (Katholieke Universiteit Leuven) and Peter Spyns (Vrije Universiteit Brussel)
PhDS 2004 PC Co-chairs	Antonia Albani (University of Augsburg), Alexios Palinginis (ETHZ), and Peter Spyns (Vrije Universiteit Brussel)
INTEROP 2004 PC Co-chairs	Monica Scannapieco (University of Rome “La Sapienza”), Paola Velardi (University of Rome “La Sapienza”), Hervé Panetto (University Henri Poincaré, Nancy 1), and Martin Zelm (CIMOSA Association)
Publication Chair	Kwong Yuen Lai (RMIT University)
Organizing Chair	Skevos Evripidou (University of Cyprus)
Publicity Chair	Laura Bright (Oregon Graduate Institute)

GADA 2004 Program Committee

José Mare Benford
Chris Greenhalgh
José Luis Bosque
David Walker
Alberto Sanchez
Jon Garibaldi
Toni Cortes
Jemal Abawajy
Javier Segovia
Heinz Stockinger
Andrea Omicini
Omer Rana
Rajkumar Buyya

Miguel Marquina
Domenico Laforenza
Asunción Gómez
Savas Parastatidis
Angélica de Antonio
Phil Lord
Jesús Carretero
Félix García
Steve Chiu
Vicente Martín
Francisco Rosales
Jan Humble

JTRES 2004 Program Committee

Greg Bollella
Joe Cross
Ron Cytron
Peter Dibble
Chris D. Gill
Giuseppe Di Giorè
Miguel De Miguel
Marco Fargetta
Marisol Garcia Valls
Doug Jensen
Doug Lea

Doug Locke
Joe Loyall
M. Teresa Higuera-Toledano
David Holmes
Kelvin Nielsen
Agostino Poggi
John Regehr
Martin Rinard
Douglas Schmidt
Jan Vitek Purdue
Andy Wellings

MIOS 2004 Program Committee

Antonia Albani
Bernhard Bauer
Jorg Becker
Radu D. Bercaru
Peter Bernus
Christoph Bussler
Emmanuel delaHostria
Jan L.G. Dietz
Klaus R. Dittrich
Rony G. Flatscher
Michael Huhns

Zahir Irani
Stefan Klein
Peter Loos
Masao J. Matsumoto
Arturo Molina
Moirá Norrie
Oliver Roos
Michael Rosemann
Klaus Turowski
Vijay K. Vaishnavi

WORM 2004 Program Committee

Aldo Gangemi
 André Valente
 Andrew Stranieri
 Bart Verheij
 Cecilia M. Sjöberg
 Carole Hafner
 Giancarlo Guizzardi
 Guiraudé Lame
 Jaime Delgado
 Jerome Euzenat
 Joost Breuker

Leonardo Lesmo
 Marc Wilikens
 Mariano F. Lopez
 Mustafa Jarrar
 Nicklas Lundblad
 Richard Benjamins
 Rita Temmerman
 Robert Meersman
 Said Tabet
 Valentina Tamma
 Youssef Amghar

WOSE 2004 Program Committee

Lora Aroyo
 Erik Duval
 Wayne Hodgins
 Robert Farrell
 Paul LeFrere
 Ambjorn Naeve

Wolfgang Nejdl
 Daniel Rehak
 Tyde Richards
 Peter Spyns
 Frans Van Assche
 Martin Wolpers

PhDS 2004 Program Committee

Sonia Bergamaschi
 Jaime Delgado

Jan Dietz
 Werner Nutt

INTEROP 2004 Program Committee

Giuseppe Berio
 Arne Berre
 Nacer Boudjlida
 Tiziana Catarci
 David Chen
 Thomas Deproix
 Frank W. Jaekel

Maria-Jose Nunez
 Michele Missikoff
 Hervé Panetto
 Colin Piddington
 Richard Stevens
 Martin Zelm

Lecture Notes in Computer Science

For information about Vols. 1–3192

please contact your bookseller or Springer

- Vol. 3305: P.M.A. Sloot, B. Chopard, A.G. Hoekstra (Eds.), *Cellular Automata*. XV, 883 pages. 2004.
- Vol. 3293: C.-H. Chi, M. van Steen, C. Wills (Eds.), *Web Content Caching and Distribution*. IX, 283 pages. 2004.
- Vol. 3292: R. Meersman, Z. Tari, A. Corsaro et al. (Eds.), *On the Move to Meaningful Internet Systems 2004: OTM 2004 Workshops*. XXIII, 885 pages. 2004.
- Vol. 3291: R. Meersman, Z. Tari et al. (Eds.), *On the Move to Meaningful Internet Systems 2004: CoopIS, DOA, and ODBASE*. Part II. XXV, 824 pages. 2004.
- Vol. 3290: R. Meersman, Z. Tari et al. (Eds.), *On the Move to Meaningful Internet Systems 2004: CoopIS, DOA, and ODBASE*. Part I. XXV, 823 pages. 2004.
- Vol. 3287: A. Sanfeliu, J.F.M. Trinidad, J.A. Carrasco Ochoa (Eds.), *Progress in Pattern Recognition, Image Analysis and Applications*. XVII, 703 pages. 2004.
- Vol. 3286: G. Karsai, E. Visser (Eds.), *Generative Programming and Component Engineering*. XIII, 491 pages. 2004.
- Vol. 3284: A. Karmouch, L. Korba, E.R.M. Madeira (Eds.), *Mobility Aware Technologies and Applications*. XII, 382 pages. 2004.
- Vol. 3280: C. Aykanat, T. Dayar, İ. Körpeoğlu (Eds.), *Computer and Information Sciences - ISCIS 2004*. XVIII, 1009 pages. 2004.
- Vol. 3274: R. Guerraoui (Ed.), *Distributed Computing*. XIII, 465 pages. 2004.
- Vol. 3273: T. Baar, A. Strohmeier, A. Moreira, S.J. Mellor (Eds.), *<<UML>> 2004 - The Unified Modelling Language*. XIII, 454 pages. 2004.
- Vol. 3271: J. Vicente, D. Hutchison (Eds.), *Management of Multimedia Networks and Services*. XIII, 335 pages. 2004.
- Vol. 3270: M. Jeckle, R. Kowalczyk, P. Braun (Eds.), *Grid Services Engineering and Management*. X, 165 pages. 2004.
- Vol. 3269: J. López, S. Qing, E. Okamoto (Eds.), *Information and Communications Security*. XI, 564 pages. 2004.
- Vol. 3266: J. Solé-Pareta, M. Smirnov, P.V. Mieghem, J. Domingo-Pascual, E. Monteiro, P. Reichl, B. Stiller, R.J. Gibbins (Eds.), *Quality of Service in the Emerging Networking Panorama*. XVI, 390 pages. 2004.
- Vol. 3265: R.E. Frederking, K.B. Taylor (Eds.), *Machine Translation: From Real Users to Research*. XI, 392 pages. 2004. (Subseries LNAI).
- Vol. 3264: G. Paliouras, Y. Sakakibara (Eds.), *Grammatical Inference: Algorithms and Applications*. XI, 291 pages. 2004. (Subseries LNAI).
- Vol. 3263: M. Weske, P. Liggesmeyer (Eds.), *Object-Oriented and Internet-Based Technologies*. XII, 239 pages. 2004.
- Vol. 3262: M.M. Freire, P. Chemouil, P. Lorenz, A. Gravey (Eds.), *Universal Multiservice Networks*. XIII, 556 pages. 2004.
- Vol. 3261: T. Yakhno (Ed.), *Advances in Information Systems*. XIV, 617 pages. 2004.
- Vol. 3260: I.G.M.M. Niemegeers, S.H. de Groot (Eds.), *Personal Wireless Communications*. XIV, 478 pages. 2004.
- Vol. 3258: M. Wallace (Ed.), *Principles and Practice of Constraint Programming - CP 2004*. XVII, 822 pages. 2004.
- Vol. 3257: E. Motta, N.R. Shadbolt, A. Stutt, N. Gibbins (Eds.), *Engineering Knowledge in the Age of the Semantic Web*. XVII, 517 pages. 2004. (Subseries LNAI).
- Vol. 3256: H. Ehrig, G. Engels, F. Parisi-Presicce, G. Rozenberg (Eds.), *Graph Transformations*. XII, 451 pages. 2004.
- Vol. 3255: A. Benczúr, J. Demetrovics, G. Gottlob (Eds.), *Advances in Databases and Information Systems*. XI, 423 pages. 2004.
- Vol. 3254: E. Macii, V. Paliouras, O. Koufopavlou (Eds.), *Integrated Circuit and System Design*. XVI, 910 pages. 2004.
- Vol. 3253: Y. Lakhnech, S. Yovine (Eds.), *Formal Techniques, Modelling and Analysis of Timed and Fault-Tolerant Systems*. X, 397 pages. 2004.
- Vol. 3252: H. Jin, Y. Pan, N. Xiao, J. Sun (Eds.), *Grid and Cooperative Computing - GCC 2004 Workshops*. XVIII, 785 pages. 2004.
- Vol. 3251: H. Jin, Y. Pan, N. Xiao, J. Sun (Eds.), *Grid and Cooperative Computing - GCC 2004*. XXII, 1025 pages. 2004.
- Vol. 3250: L.-J. (LJ) Zhang, M. Jeckle (Eds.), *Web Services*. X, 301 pages. 2004.
- Vol. 3249: B. Buchberger, J.A. Campbell (Eds.), *Artificial Intelligence and Symbolic Computation*. X, 285 pages. 2004. (Subseries LNAI).
- Vol. 3246: A. Apostolico, M. Melucci (Eds.), *String Processing and Information Retrieval*. XIV, 332 pages. 2004.
- Vol. 3245: E. Suzuki, S. Arikawa (Eds.), *Discovery Science*. XIV, 430 pages. 2004. (Subseries LNAI).
- Vol. 3244: S. Ben-David, J. Case, A. Maruoka (Eds.), *Algorithmic Learning Theory*. XIV, 505 pages. 2004. (Subseries LNAI).
- Vol. 3243: S. Leonardi (Ed.), *Algorithms and Models for the Web-Graph*. VIII, 189 pages. 2004.

- Vol. 3242: X. Yao, E. Burke, J.A. Lozano, J. Smith, J.J. Merelo-Guervós, J.A. Bullinaria, J. Rowe, P. Tiño, A. Kabán, H.-P. Schwefel (Eds.), *Parallel Problem Solving from Nature - PPSN VIII*. XX, 1185 pages. 2004.
- Vol. 3241: D. Kranzlmüller, P. Kacsuk, J.J. Dongarra (Eds.), *Recent Advances in Parallel Virtual Machine and Message Passing Interface*. XIII, 452 pages. 2004.
- Vol. 3240: I. Jonassen, J. Kim (Eds.), *Algorithms in Bioinformatics*. IX, 476 pages. 2004. (Subseries LNBI).
- Vol. 3239: G. Nicosia, V. Cutello, P.J. Bentley, J. Timmis (Eds.), *Artificial Immune Systems*. XII, 444 pages. 2004.
- Vol. 3238: S. Biundo, T. Frühwirth, G. Palm (Eds.), *KI 2004: Advances in Artificial Intelligence*. XI, 467 pages. 2004. (Subseries LNAI).
- Vol. 3236: M. Núñez, Z. Maamar, F.L. Pelayo, K. Poustchi, F. Rubio (Eds.), *Applying Formal Methods: Testing, Performance, and M/E-Commerce*. XI, 381 pages. 2004.
- Vol. 3235: D. de Frutos-Escrig, M. Nunez (Eds.), *Formal Techniques for Networked and Distributed Systems - FORTE 2004*. X, 377 pages. 2004.
- Vol. 3232: R. Heery, L. Lyon (Eds.), *Research and Advanced Technology for Digital Libraries*. XV, 528 pages. 2004.
- Vol. 3231: H.-A. Jacobsen (Ed.), *Middleware 2004*. XV, 514 pages. 2004.
- Vol. 3230: J.L. Vicedo, P. Martínez-Barco, R. Muñoz, M. Saiz Noeda (Eds.), *Advances in Natural Language Processing*. XII, 488 pages. 2004. (Subseries LNAI).
- Vol. 3229: J.J. Alferes, J. Leite (Eds.), *Logics in Artificial Intelligence*. XIV, 744 pages. 2004. (Subseries LNAI).
- Vol. 3226: M. Bouzeghoub, C. Goble, V. Kashyap, S. Spaccapietra (Eds.), *Semantics for Grid Databases*. XIII, 326 pages. 2004.
- Vol. 3225: K. Zhang, Y. Zheng (Eds.), *Information Security*. XII, 442 pages. 2004.
- Vol. 3224: E. Jonsson, A. Valdes, M. Almgren (Eds.), *Recent Advances in Intrusion Detection*. XII, 315 pages. 2004.
- Vol. 3223: K. Slind, A. Bunker, G. Gopalakrishnan (Eds.), *Theorem Proving in Higher Order Logics*. VIII, 337 pages. 2004.
- Vol. 3222: H. Jin, G.R. Gao, Z. Xu, H. Chen (Eds.), *Network and Parallel Computing*. XX, 694 pages. 2004.
- Vol. 3221: S. Albers, T. Radzik (Eds.), *Algorithms - ESA 2004*. XVIII, 836 pages. 2004.
- Vol. 3220: J.C. Lester, R.M. Vicari, F. Paraguaçu (Eds.), *Intelligent Tutoring Systems*. XXI, 920 pages. 2004.
- Vol. 3219: M. Heisel, P. Liggesmeyer, S. Wittmann (Eds.), *Computer Safety, Reliability, and Security*. XI, 339 pages. 2004.
- Vol. 3217: C. Barillot, D.R. Haynor, P. Hellier (Eds.), *Medical Image Computing and Computer-Assisted Intervention - MICCAI 2004*. XXXVIII, 1114 pages. 2004.
- Vol. 3216: C. Barillot, D.R. Haynor, P. Hellier (Eds.), *Medical Image Computing and Computer-Assisted Intervention - MICCAI 2004*. XXXVIII, 930 pages. 2004.
- Vol. 3215: M.G. Negoita, R.J. Howlett, L.C. Jain (Eds.), *Knowledge-Based Intelligent Information and Engineering Systems*. LVII, 906 pages. 2004. (Subseries LNAI).
- Vol. 3214: M.G. Negoita, R.J. Howlett, L.C. Jain (Eds.), *Knowledge-Based Intelligent Information and Engineering Systems*. LVIII, 1302 pages. 2004. (Subseries LNAI).
- Vol. 3213: M.G. Negoita, R.J. Howlett, L.C. Jain (Eds.), *Knowledge-Based Intelligent Information and Engineering Systems*. LVIII, 1280 pages. 2004. (Subseries LNAI).
- Vol. 3212: A. Campilho, M. Kamel (Eds.), *Image Analysis and Recognition*. XXIX, 862 pages. 2004.
- Vol. 3211: A. Campilho, M. Kamel (Eds.), *Image Analysis and Recognition*. XXIX, 880 pages. 2004.
- Vol. 3210: J. Marcinkowski, A. Tarlecki (Eds.), *Computer Science Logic*. XI, 520 pages. 2004.
- Vol. 3209: B. Berendt, A. Hotho, D. Mladenic, M. van Someren, M. Spiliopoulou, G. Stumme (Eds.), *Web Mining: From Web to Semantic Web*. IX, 201 pages. 2004. (Subseries LNAI).
- Vol. 3208: H.J. Ohlbach, S. Schaffert (Eds.), *Principles and Practice of Semantic Web Reasoning*. VII, 165 pages. 2004.
- Vol. 3207: L.T. Yang, M. Guo, G.R. Gao, N.K. Jha (Eds.), *Embedded and Ubiquitous Computing*. XX, 1116 pages. 2004.
- Vol. 3206: P. Sojka, I. Kopecek, K. Pala (Eds.), *Text, Speech and Dialogue*. XIII, 667 pages. 2004. (Subseries LNAI).
- Vol. 3205: N. Davies, E. Mynatt, I. Siio (Eds.), *UbiComp 2004: Ubiquitous Computing*. XVI, 452 pages. 2004.
- Vol. 3204: C.A. Peña Reyes, *Coevolutionary Fuzzy Modeling*. XIII, 129 pages. 2004.
- Vol. 3203: J. Becker, M. Platzner, S. Vernalde (Eds.), *Field Programmable Logic and Application*. XXX, 1198 pages. 2004.
- Vol. 3202: J.-F. Boulicaut, F. Esposito, F. Giannotti, D. Pedreschi (Eds.), *Knowledge Discovery in Databases: PKDD 2004*. XIX, 560 pages. 2004. (Subseries LNAI).
- Vol. 3201: J.-F. Boulicaut, F. Esposito, F. Giannotti, D. Pedreschi (Eds.), *Machine Learning: ECML 2004*. XVIII, 580 pages. 2004. (Subseries LNAI).
- Vol. 3199: H. Schepers (Ed.), *Software and Compilers for Embedded Systems*. X, 259 pages. 2004.
- Vol. 3198: G.-J. de Vreede, L.A. Guerrero, G. Marín Raventós (Eds.), *Groupware: Design, Implementation and Use*. XI, 378 pages. 2004.
- Vol. 3196: C. Stary, C. Stephanidis (Eds.), *User-Centered Interaction Paradigms for Universal Access in the Information Society*. XII, 488 pages. 2004.
- Vol. 3195: C.G. Puntonet, A. Prieto (Eds.), *Independent Component Analysis and Blind Signal Separation*. XXIII, 1266 pages. 2004.
- Vol. 3194: R. Camacho, R. King, A. Srinivasan (Eds.), *Inductive Logic Programming*. XI, 361 pages. 2004. (Subseries LNAI).
- Vol. 3193: P. Samarati, P. Ryan, D. Gollmann, R. Molva (Eds.), *Computer Security - ESORICS 2004*. X, 457 pages. 2004.

Table of Contents

Posters of the 2004 CoopIS (Cooperative Information Systems) International Conference

Dynamic Publish/Subscribe in Mobile Peer-to-Peer Systems	1
<i>Eiko Yoneki, Jean Bacon</i>	
The Virtual Cooperative Project Taking into Account Work Semantic Meaning in Architectural Cooperative Design	3
<i>Mohamed Bouattour, Gilles Halin, J. Claude Bignon</i>	
Collaborative Fuzzy Agents Using Constraint Logic Programming over Finite Domains	5
<i>Susana Muñoz-Hernández, Jose Manuel Gómez-Pérez</i>	
Design a High-Level Language for Large Network Security Management	7
<i>Jangha Kim, Byungwook Song, Kanghee Lee, Sangwook Kim, Daesik Choi, Jungtaek Seo</i>	
A Context-Based Awareness Mechanism for Mobile Cooperative Users . . .	9
<i>Manuele Kirsch-Pinheiro, Marlène Villanova-Oliver, Jérôme Gensel, Hervé Martin</i>	
Access Control-Based Distribution of Shared Documents	12
<i>Sonia Mendoza, Alberto L. Morán, Dominique Decouchant, Ana María Martínez Enríquez, Jesus Favela</i>	
Service-Oriented Architecture of TeleCARE	14
<i>Victor Guevara-Masis, Hamideh Afsarmanesh, Louis O. Hertzberger</i>	
Feedback Partitioning and Decomposition-Oriented Analysis of Cyclic Workflow Graphs	17
<i>Yongsun Choi, J. Leon Zhao</i>	
Towards Implementing Consistency in OMG MOF-Based Repository Systems	19
<i>Ilia Petrov, Stefan Jablonski, Marc Holze</i>	
Privacy-Preserving ID-Based Service Provision in Ubiquitous Computing Environments	21
<i>Keon Myung Lee, Sang Ho Lee</i>	

Agents for Decentralised Process Design	23
<i>Iain Stalker, Nikolay Mehandjiev, Georg Weichhart, Kurt Fessl</i>	

**Posters of the 2004 ODBASE (Ontologies,
Databases, and Applications of Semantics)
International Conference**

Knowledge Signatures for Information Integration	26
<i>Judi Thomson, Andrew Cowell, Patrick Paulson, Scott Butner, Mark Whiting</i>	

Efficient Processing of Huge Ontologies in Logic and Relational Databases	28
<i>Timo Weithöner, Thorsten Liebig, Günther Specht</i>	

Representing and Reasoning for Spatiotemporal Ontology Integration....	30
<i>Nacera Bennacer, Marie-Aude Aufaure, Nadine Cullot, Anastasiya Sotnykova, Christelle Vangenot</i>	

Effective and Efficient Melody-Matching Method in a Large-Scale Music Database	32
<i>Sung-Phil Heo</i>	

**Posters of the 2004 DOA (Distributed
Objects and Applications) International
Conference**

A CORBA-Based System for the Monitoring of Petroleum Fields	34
<i>Diogo Salim, Thais Batista, Adelardo Medeiros</i>	

Context-Aware Distributed Deployment of Component-Based Applications.....	36
<i>Dhouha Ayed, Chantal Taconet, Nawel Sabri, Guy Bernard</i>	

Towards an Incremental Process Model Based on AOP for Distributed Component-Based Software Development.....	38
<i>Alexandre Alvaro, Daniel Lucrédio, Antonio Francisco do Prado, Eduardo Santana de Almeida</i>	

Supporting Nomadic Desktop Computing Using an Internet Application Workbench	40
<i>Stefan Paal, Reiner Kammüller, Bernd Freisleben</i>	

A Distributed Object Platform to Achieve Nomadic Interactions	44
<i>Domenico Cotroneo, Armando Migliaccio, Stefano Russo</i>	

A Virtual-Machine-Based Middleware	46
<i>Alcides Calsavara, Agnaldo K. Noda, Juarez da Costa, Carlos Kolb, Leonardo Nunes</i>	
Workshop on Grid Computing and Its Application to Data Analysis (GADA)	
PC Co-chairs' Message	48
<i>Editors: Pilar Herrero, María S. Pérez, Milena Radenkovic, Victor Robles</i>	
Simulation of Mars Impact Cratering on a Grid Enviroment	50
<i>Eduardo Huedo, Alain Lepinette, Rubén S. Montero, Ignacio M. Llorente, Luis Vázquez</i>	
A Grid Environment for Simulation and Optimization and a First Implementation of a Biomedical Application	59
<i>Silke Halstenberg, Karl-Uwe Stucky, Wolfgang Süß</i>	
Application of Grid Security to Personal Distributed Environments	68
<i>Allan Tomlinson, Scarlet Schwiderski-Grosche</i>	
An Adaptive Cost Model for Distributed Query Optimization on the Grid	79
<i>Yahya Slimani, Faiza Najjar, Najla Mami</i>	
GDIS: A Service-Based Architecture for Data Integration on Grids	88
<i>Carmela Comito, Domenico Talia</i>	
Managing Long Running Queries in Grid Environment	99
<i>Ruslan Fomkin, Tore Risch</i>	
Improving Distributed Data Mining Techniques by Means of a Grid Infrastructure	111
<i>Alberto Sánchez, José M. Peña, María S. Pérez, Víctor Robles, Pilar Herrero</i>	
Improving Grid Services Security with Fine Grain Policies	123
<i>Fabrizio Baiardi, Fabio Martinelli, Paolo Mori, Anna Vaccarelli</i>	
Resource Dissemination Policies on Grids	135
<i>Marta Beltrán, Jose L. Bosque, Antonio Guzmán</i>	
A Grid Framework for Approximate Aggregate Query Answering on Summarized Sensor Network Readings	144
<i>Alfredo Cuzzocrea, Filippo Furfaro, Giuseppe M. Mazzeo, Domenico Saccà</i>	
Large-Scale Resource Selection in Grids	154
<i>Ali M. Roumani, David B. Skillicorn</i>	

A Proposal of a CIM-Based Policy Management Model for the OGSA Security Architecture	165
<i>Félix J. García Clemente, Gregorio Martínez Pérez, Óscar Cánovas Reverte, Antonio F. Gómez Skarmeta</i>	
A Grid-Based Approach for Processing Group Activity Log Files	175
<i>Fatos Xhafa, Santi Caballé, Thanasis Daradoumis, Nan Zhou</i>	
Design, Implementation, and Evaluation of a Resource Management Multiagent System for a Multimedia Processing Grid	187
<i>Isaac Chao, Ramon Sangüesa, Oscar Ardaiz</i>	
Towards a Peer-to-Peer Event Broker Grid in a Hybrid Network Environment	198
<i>Eiko Yoneki, Jean Bacon</i>	
Bioinformatics Data Access Service in the ProGenGrid System	211
<i>Giovanni Aloisio, Massimo Cafaro, Sandro Fiore, Maria Mirto</i>	
MSF: A Workflow Service Infrastructure for Computational Grid Environments	222
<i>Seogchan Hwang, Jaeyoung Choi</i>	
Using PROTEUS for Modeling Data Mining Analysis of Proteomics Experiments on the Grid	232
<i>Mario Cannataro, Pietro Hiram Guzzi, Tommaso Mazza, Pierangelo Veltri</i>	
Workshop on Java Technologies for Real-Time and Embedded Systems (JTRES)	
PC Co-chairs' Message	244
<i>Editors: Angelo Corsaro, Corrado Santoro</i>	
Real-Time Teaching with Java: JPR ³	246
<i>Diego Alonso, Juan A. Pastor, Bárbara Álvarez</i>	
Toward a Component-Based Embedded Java-Oriented Operating System	256
<i>Frédéric Dang Tran, Jean-Philippe Fassino, Olivier Lobry, Jacques Poulou, Nicolas Rivierre</i>	
Studying the Behaviour of the Single Parent Rule in Real-Time Java	268
<i>M. Teresa Higuera-Toledano</i>	
Supporting Mixed Criticality Applications in a Ravenscar-Java Environment	278
<i>Hao Cai, Andy Wellings</i>	