FINAL PROGRAM

THE 2008 ACM SIGAPP SYMPOSIUM ON APPLIED COMPUTING

http://www.acm.org/conferences/sac/sac2008

Fortaleza, Ceará, Brazil
March 16 - 20, 2008

Organizing Committee

Roger L. Wainwright
Hisham M. Haddad
Angelo Brayner
Ronaldo Menezes
Mirko Viroli

Maria Andréia F. Rodriges
Rossana Maria C. Andrade
Nabor C. Mendonça
Javan M. Machado

Lorie M. Liebrock
Mathew J. Palakal
Jiman Hong
Sung Y. Shin

HOSTED BY
University of Fortaleza (UNIFOR), Brazil
Federal University of Ceará (UFC), Brazil

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SAC 2008

Introduction

SAC 2008 is a premier international conference on applied computing and technology. Attendees have the opportunity to hear from expert practitioners and researchers about the latest trends in research and development in their fields. SAC 2008 features 2 keynote speakers on Monday and Wednesday, from 8:20 to 10:00. The symposium consists of Tutorial and Technical programs. The Tutorial Program offers 4 half-day tutorials on Sunday March 16, 2008, starting at 8:30am and 2pm. The Technical Program offers 45 tracks on a wide number of different research topics, which run from Monday March 17 through Thursday March 20, 2008. Regular sessions start at 8:20am and end at 5:20pm in up to 6 parallel sessions. Moreover, two poster tracks also run on Tuesday March 18, from 9:00am to 12:00am and from 14:00am to 17:00am.

Organizing Committee

Roger L. Wainwright, Symposium Chair
University of Tulsa, USA
Hisham M. Haddad, Symposium Chair, Treasurer, Webmaster
Kennesaw State University, USA
Angelo Brayner, Symposium Vice-Chair
University of Fortaleza, Brazil
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Florida Institute of Technology, Melbourne, USA
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Alma Mater Studiorum - Università di Bologna, Italy
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Rosana Maria C. Andrade, Publicity Chair
Federal University of Ceará, Brazil
Jiman Hong, Asia Publicity Chair
Soongsil University, Korea
Sung Y. Shin, US Publicity Chair
South Dakota State University, USA

Track Chairs

Adaptive Techniques in Operating Systems (ATOS)
Jiman Hong, Soongsil University, Korea
Tei-Wei Kuo, National Taiwan University, Taiwan

Advances in Computer Simulation (ACS)
Ana Bazzan, UFRGS, Brazil
Giuseppe Vizzari, University of Milano-Bicocca, Italy

Advances in Spatial and Image-based Information Systems (ASIIIS)
Richard Chbeir, LE2I-CNRS, France
Christophe Charamunt, Naval Academy Research Institute, France, France
Ki-June Li, Pusan National University, Korea
Kokon Yetongnon, Bourgogne University, France

Agent-Oriented Programming, Systems, Languages and Applications (APSLA)
Fuyuki Ishikawa, National Institute of Informatics, Japan
Eric Platon, Paris 6 University, France
Alessandro Ricci, Università di Bologna, Italy
Danny Weyns, Katholieke Universiteit Leuven, Belgium

Applications of Evolutionary Computation (EC)
Bryant Julstrom, St. Cloud State University, USA

Artificial Intelligence in Space Applications (AISA)
Rafael Santos, INPE - National Institute for Space Research, Brazil
José Demisio Simões da Silva, National Institute for Space Research, Brazil

Bioinformatics (BIO)
Rajaraman Kanagasabai, Institute for Infocomm Research, Singapore
Mathew Palakal, IUPUI, USA
William Perrizzo, North Dakota State University, USA

Computational Logic and Computational Intelligence in Signal and Image Analysis (CISIA)
Agostinho da Rosa, Technical University of Lisbon, Portugal
Chih-Cheng Hung, Southern Polytechnic State University, USA

Computer Applications in Health Care (CAHC)
Rosa Maria E. M. Costa, Universidade do Estado do Rio de Janeiro, Brazil
Fátima Nunes, Centro Universitário Eurípedes de Marília, Brazil

Computer Forensics (CF)
Kamesh Namuduri, Wichita State University, USA
Brajendra Panda, University of Arkansas, USA

Computer Networks (CN)
Mario Freire, University of Beira Interior, Portugal
Edmundo Monteiro, University of Coimbra, Portugal
Manuela Pereira, University of Beira Interior, Portugal
Teresa Vazão, IST/INESC ID, Portugal

Computer Security (SEC)
Giampasalo Bella, Università di Catania, ITALY

Constraint Satisfaction and Programming (CSP)
Stefano Bistarelli, Università ‘G. d’Annunzio’ Chieti-Pescara, IT- CNR, Pisa, Italy
Eric Monfroy, UPSM, Chile and LINA, University of Nantes, France
Barry O’Sullivan, University College Cork, Ireland

Coordination Models, Languages and Applications (CM)
Michael Schumacher, University of Applied Sciences Western Switzerland, Switzerland

Data Mining (DM)
Hasan Janjil, Wayne State University, USA

Data Streams (DS)
Jesus Aguilar, Univ. Pablo Olavide, Spain
André Carvalho, University of Sao Paulo (USP), Brazil
João Gama, University of Porto (UP), Portugal

Database Theory, Technology, and Applications (DTTA)
Rami Haraty, Lebanese American University, Lebanon
Agostinho da Rosa, Technical University of Lisbon, Portugal

Dependable and Adaptive Distributed Systems (DADSI)
Karl M. Goeschla, Vienna University of Technology, Austria
Svein Hallsteinen, Sintef, Norway
Rui Oliveira, Universidade do Minho, Portugal
Self Organization in Pervasive Distributed Systems (SOPDS)
Marco Mana, University of Modena and Reggio Emilia, Italy
Justin Werfel, New England Complex Systems Institute and Harvard Medical School, USA

Software Engineering (SE)
Sung Y. Shin, South Dakota University, USA
Chang Oan Sung, Indiana University Southeast, USA
Eric Wong, University of Texas at Dallas, USA

Software Verification (SV)
Fausto Spoto, Universita' di Verona, Italy

The Semantic Web and Applications (SWA)
Hyoil Han, Drexel University, USA

Trust, Recommendations, Evidence and other Collaboration Know-how (TRECK)
Vigiloro Almeida, Federal University of Minas Gerais, Brazil
Jean-Marc Seigneur, University of Geneva and Venyo, Switzerland

Ubiquitous Computing (UC)
Achilles Kameas, Hellenic Open University, Greece

Web Technologies (WT)
Yoaukim Badr, INSa-Lyon, France
Djalma Benslimane, University of Lyon, France
Zakaria Maamar, Zayed University, United Arab Emirates

Local Support

Local support for SAC 2008 is provided by the University of Fortaleza (UNIFOR), Federal University of Ceará (UFC), FUNCAP, Bull, CNPq, Indica Comunicação e Eventos, and Bando de Criação. The SAC organizing committee acknowledges and thanks the local supporters for their generous contributions to SAC 2008. Their support has been essential to the success of Symposium, and is greatly appreciated.

ACM SIGAPP

The ACM Special Interest Group on Applied Computing is ACM’s primary applications-oriented SIG. Its mission is to further the interests of the computing professionals engaged in the development of new computing applications and applications areas and the transfer of computing technology to new problem domains. SIGAPP offers practitioners and researchers the opportunity to share mutual interests in innovative application fields, technology transfer, experimental computing, strategic research, and the management of computing. SIGAPP also promotes widespread cooperation among business, government, and academic computing activities. Its annual Symposium on Applied Computing (SAC) provides an international forum for presentation of the results of strategic research and experimentation for this inter-disciplinary environment. SIGAPP membership fees are: $30.00 for ACM Non-members, $15.00 for ACM Members, and $8.00 for Student Members. For information contact Barrett Bryant at bryant@cis.uab.edu. Also, checkout the SIGAPP website at http://www.acm.org/sigapp/

Alexander Romanovsky, University of Newcastle, UK

Document Engineering (DE)
Rafael Lins, Universidade Federal de Pernambuco, Brazil

e-Business Applications (EBA)
Fahim Akhter, Zayed University, United Arab Emirates
Ibrahim Kamel, University of Sharjah, UAE
Lami Raya, University of Sharjah, United Arab Emirates

Embedded Systems: Applications, Solutions, and Techniques (EMBS)
Alessio Bechini, University of Pisa, Italy
Prette Cosimo Antonio, University of Pisa, Italy

Engineering Large-Scale Distributed Systems (ELSDS)
Fabrizio Falchi, ISTI-CNRI, Italy
Claudio Lucchesi, ISTI-CNRI, Italy

Enterprise Information Systems (EIS)
Rogero de Carvalho, CEFET Campos, Brazil
Asterio Tanaka, Federal University of State of Rio de Janeiro, Brazil

Geometrical Constraints and Reasoning (GCR)
Xiao-Shan Gao, KLMM, Institute of System Science,AMSS, Academia Sinica, Beijing, P.R. China
Dominique Michelucci, Université de Bourgogne, Dijon, France
Pascal Schreck, LSHT-Université Louis Pasteur, Strasbourg, France

Information Access and Retrieval (IAR)
Gloria Bordogna, CNR IDPA, Italy
Gabriella Pasi, Università degli Studi di Milano Bicocca, Italy

Middleware Engineering (ME)
Sheikh Iqbal Ahamed, Marquette University, USA
Praveen Madiraju, Marquette University, USA

Mobile Agents and Systems (MAS)
Costin Badica, University of Craiova, Romania
Maria Ganzha, EUH-E and IBS PAN, Poland
Yung-Chuan Lee, Southern Illinois University, USA
Shahram Rahimi, Southern Illinois University, USA

Mobile Computing and Applications (MCA)
Alvin Chan, The Hong Kong Polytechnic University, Hong Kong
Hong Vo Leong, The Hong Kong Polytechnic University, Hong Kong

Multimedia and Visualization (MMV)
Zhang Mingjun, Agilent Technologies, USA
Chaman Sabharwal, University of Missouri Science & Technology, USA

Natural Language Processing and Speech Recognition (NLSP)
Marius Pasca, Google, USA
Marius Silaghi, Florida Institute of Technology, USA

Object-Oriented Programming Languages and Systems (OOPS)
Davide Ancona, University of Genova, Italy
Alex Buckley, Sun Microsystems, USA

Organizational Engineering (OE)
Artur Caetano, IST, Technical University of Lisbon, Portugal
Jose Trinote, IST, Technical University of Lisbon, Portugal
Robert Winter, University of St. Gallen, Switzerland

Programming for Separation of Concerns (PSC)
Yvonne Coady, University of Victoria, Canada
Claudio Lucchesi, ISTI-CNRI, Italy

Programming Languages (PL)
Barrett Bryant, The University of Alabama at Birmingham, USA
Chang-Hyun Jo, South Dakota University, USA

Real-Time Systems (RTS)
Leandro Becker, Federal University of Santa Catarina, Brazil
Paulo Martins, Chaminade University of Honolulu, USA

Requirements Engineering (RE)
Maria Lucastre, Universidade de Pernambuco, Brazil

Robotics: Hardware, Software, and Embedded Systems (RHSES)
Eduardo Marques, Univ. of Sao Paulo, Brazil
Denis Wolf, University of Sao Paulo, Brazil

Finally Program 2 SAC 2008, March 16 – 20, 2008

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Robotics: Hardware, Software, and Embedded Systems (RHSES)
Eduardo Marques, Univ. of Sao Paulo, Brazil
Denis Wolf, University of Sao Paulo, Brazil
Welcome to the 23rd Annual ACM Symposium on Applied Computing (SAC 2008). This international event is dedicated to computer scientists, engineers, and practitioners seeking innovative ideas in various areas of computer applications. This year, the conference is hosted by the University of Fortaleza and the Federal University of Ceará, in Brazil. The organizing committee is grateful to your participation in this exciting international gathering.

The ACM Special Interest Group on Applied Computing is dedicated to further the interests of computing professionals engaged in the design and development of new computing applications, interdisciplinary applications areas, and applied research. The conference provides a forum for discussion and exchange of new ideas addressing computational algorithms and complex applications. This goal is reflected in the wide spectrum of application areas and tutorials designed to provide a variety of discussion topics during this event.

SAC 2008 offers Technical, Posters, and Tutorials programs. We thank the Program Chairs, Ronaldo Menezes from Florida Institute of Technology and Mirko Viroli from Alma Mater Studiorum - Università di Bologna, Italy, for their tireless efforts in coordinating these programs represented by 45 technical tracks and over 1300 paper submissions. Individual technical tracks are professionally organized by dedicated Track Chairs and Co-Chairs. Each track maintains a program committee and a group of highly qualified reviewers. We thank the Track Chairs, Co-Chairs, and participating reviewers for their commitment to the success of SAC 2008. The Posters Program, organized by Mathew Palakal from Indiana University Purdue University, offers invited posters representing the conference tracks. We thank Mathew for his effort and dedication to the success of this program. The Tournament program offers four high-quality and timely tutorials, selected from over 23 tutorial submissions. We thank the Tutorials Committee, lead by Maria Andréia Rodrigues, from the University of Fortaleza, for the hard work in putting this year’s successful program. We also thank our invited keynote speakers for sharing their knowledge and experience, the authors and presenters for sharing their work with us, and all attendees for joining us in Fortaleza, Brazil.

The local organizing committee has always been the key to the success of the conference. This year, the local committee is lead by Nabor Mendonça, from the University of Fortaleza, and Javam Machado from the Federal University of Ceara. We thank them for their outstanding leadership. We thank Lorie Liebrock, from New Mexico Institute of Mining and Technology, for her tremendous effort putting together the conference proceedings. We also thank the Publicity Committee lead by Rossana Maria Andrade from Federal University of Ceara, Jiman Hong from Soongsil University, and Sung Shin from South Dakota State University. Finally, we extend our thanks and gratitude to Angelo Brayner, from University of Fortaleza, for hosting the conference and coordinating the local support.

Again, we welcome you to SAC 2008 in the beautiful coastal city of Fortaleza. We hope you enjoy your stay in Fortaleza and leave this event enriched with new ideas and friends. Next year, we invite you to participate in SAC 2009 to be held in Honolulu, Hawaii, USA, March 8 to 12, 2009. The conference will be hosted by the University of Hawaii at Manoa and Chaminade University of Honolulu. We hope to see there!

Welcome to the 23rd Symposium on Applied Computing (SAC 2008). Over the past 22 years, SAC has been an international forum for researchers and practitioners to present their findings and research results in the areas of computer applications and technology. The SAC 2008 Technical Program offers a wide range of tracks covering major areas of computer applications. Highly qualified referees with strong expertise and special interest in their respective research areas carefully reviewed the submitted papers. As part of the Technical Program, this year the Tutorial Program offers six tutorials that were carefully selected from numerous proposals. Many thanks to Maria Andréia Formico Rodrigues from the University of Fortaleza for chairing the Tutorial Program. Also, this is the 5th year that SAC incorporates poster papers into the Technical Program. The inclusion of posters would not be possible without the work of our Posters Chair Mathew Palakal from Indiana University Purdue University.

SAC 2008 would not be possible without contributions from members of the scientific community. As anyone can imagine, many people have dedicated tremendous time and effort over the period of 10 months to bring you an excellent program. The success of SAC 2008 relies on the effort and hard work of many volunteers. On behalf of the SAC 2008 Organizing Committee, we would like to take this opportunity to thank all of those who made this year’s technical program a reality, including speakers, referees, track chairs, session chairs, presenters, and attendees. We would specially like to thank the local arrangement committee lead by Angelo Brayner from the University of Fortaleza.

SAC’s open call for Track Proposals resulted in the submission of 50 track proposals. These proposals were carefully evaluated by the conference Program Committee. Some proposals were rejected on the grounds of either not being appropriate for the areas that SAC covers traditionally or being of rather narrow and specialized nature. Eventually, 45 tracks were established, which then went on to produce their own call for papers. In response to these calls, 1307 papers were submitted from more than 60 countries. After a reviewing process where each paper was evaluated by a minimum of three reviewers, 384 papers were strongly recommended for acceptance as full papers and inclusion in
the Conference Proceedings. This gives SAC 2008 an acceptance rate of 29.3 across all tracks. These numbers make SAC 2008 the most successful and the most competitive SAC to date. This year we also introduced the concept of themes where tracks are organized on 6 main areas. The themes were used in the preparation of the schedule of presentations aiming at minimizing the overlap of presentations in related fields.

We hope you will enjoy the meeting and have the opportunity to exchange your ideas and make new friends. We also hope you will enjoy your stay in Fortaleza, Brazil and take pleasure from the many entertainments and activities that the city and Fortaleza has to offer. We encourage you and your colleagues to submit your research findings to next year’s technical program when the conference will be move back to the USA, more specifically to Hawaii. Thank you for being part of SAC 2008, and we hope to see you in Hawaii for SAC 2009.

SAC 2008 Themes

This year SAC tracks are divided into 6 themes: each theme will be associated to one room, hence related tracks will take place sequentially in the same room, so as to promote sharing and cross-fertilized of ideas through the whole theme audience. Check the schedule at page 7 for details. These are the six themes of SAC 2008:

(ENG) Engineering
Sala Fernando Pessoa
Tracks: DE, ELSDS, ME, OE, RE, SE

(IS) Information Systems
Sala Iracema
Tracks: ASHS, DM, DS, DTTA, EIS, IAR, MMV

(AIA) Artificial Intelligence and Agents
Sala Tom Jobim
Tracks: AC, AISA, ATOS, CISIA, EC, GCR, MAS, MCA, SOPDS, TRECK

(DS) Distributed Systems
Sala Vasco da Gama
Tracks: CN, DADS, SEC, SWA, WT

(SWD) Software Development
Sala Amália Rodrigues
Tracks: ACS, APSLA, CM, CSP, OOPS, PSC, PL, RTS, SV

(APP) Applications
Sala Eça de Queiroz
Tracks: BIO, CAHC, CF, EBA, EMBS, NLSP, RHSES, UC

Other Activities

Review Meeting: Sunday March 16, from 18:00 to 19:00. Open for SAC Organizing Committee and Track Chairs and Co-Chairs.

Future SAC Organization Meeting: Monday March 17, from 18:00 to 19:00 in room Sala Iracema. Open for SAC Organizing Committee.

SAC Reception: Monday March 17, from 19:00 to 22:00. Leaving from Vila Galé Hotel. Open for all registered attendees.

Posters Session: Tuesday March 18, from 9:00 to 11:00 and from 14:00 to 17:00 in room Sala Iracema. Open to everyone.

SAC General Luncheon: Tuesday March 18, from 12:10 to 13:30. Vila Galé (Hotel) Restaurant. Open for all registered attendees.

SIGAPP Annual Business Meeting: Tuesday March 18, from 18:00 to 19:00 in room Sala Iracema. Open to everyone.

SAC Banquet: Wednesday March 19, 2008. La Maison Dunas. Departure at 20:00 from Vila Galé Hotel. Open for Banquet Ticket holders. See your tickets for full details.

SAC Best Papers Award: Wednesday March 19, 2008. La Maison Dunas. During the SAC Banquet SAC Organization Committee will award one best paper for each of the six themes of this conference.

Track-Chairs Luncheon: Thursday March 20, from 12:10 to 13:30. Vila Galé (Hotel) Restaurant. Open for SAC Organizing Committee, Track Chairs and Co-Chairs.

SAC 2009

SAC 2009 will be held in Honolulu, Hawaii, USA, March 8 to 12, 2009. It is co-hosted by University of Hawaii at Manoa and Chaminade University of Honolulu. Please check the registration desk for handouts. You can also visit the website at http://www.acm.org/conferences/sac/sac2009/.
Monday Keynote Address

Cognitive, Robotic, and Social Prostheses: New Approaches for Augmenting Human Capabilities

Dr. Jeffrey M. Bradshaw
Senior Research Scientist
Florida Institute for Human and Machine Cognition
Pensacola, Florida, USA

MONDAY MARCH 17, 8:20 – 10:00AM
ROOM: SALÃO MASTER I

Abstract

The accumulated tools of human history can all profitably be regarded as prostheses—not in the sense that they compensate for the specific disabilities of any given individual, but rather because they enable us to overcome the biological limitations shared by all of us. Cognitive, robotic, and social prostheses are computational systems that leverage and extend human intellectual, perceptual, physical, and collaborative capacities, just as the steam shovel was a sort of muscular prosthesis or eyeglasses a sort of visual prosthesis. Unlike the tools of traditional Artificial Intelligence, these prostheses are not designed to replace the human role in tasks but rather to augment human capabilities and enable people to focus their unique strengths on ever-more challenging problems. In this talk I will describe and demonstrate some of the exciting developments in this emerging field.

Dr. Jeffrey M. Bradshaw is a Senior Research Scientist at the Florida Institute for Human and Machine Cognition (IHMC) where he leads the research group developing the KAOS policy and domain services framework. He has been a Fulbright Senior Scholar at the European Institute for Cognitive Sciences and Engineering (EURISCO) in Toulouse, France; an Honorary Visiting Researcher at the Center for Intelligent Systems and their Applications and AIAI at the University of Edinburgh, Scotland; a visiting professor at the Institut Cognitique at the University of Bordeaux; is former chair of ACM SIGART; and former chair of the RIAI-ACS Science Council for NASA Ames Research Center. He is a member of the National Research Council (NRC) Committee on Military and Intelligence Methodology for Emergent Physiological and Cognitive/Neural Science Research in the Next Two Decades, and is a scientific advisor to the Japanese NEC Technology Paradigm Shifts initiative and the HCIV program at the German National AI Research Center (DFKI). He is a member of the Technical Committee for IEEE Systems, Man and Cybernetics and for the Aerospace Human Factors and Ergonomics of the IEA. He will serve as co-program chair for Intelligent User Interfaces (IUI 2008) and as Program Vice Chair, 2008 IEEE International Conference on Distributed Human-Machine Systems (DHMS 2008). Dr. Bradshaw serves on the Autonomous Agents Steering committee and on the editorial board of the Journal of Autonomous Agents and Multi-Agent Systems, the Web Semantics Journal, Schedae Informaticae, and the Web Intelligence Journal, and was formerly on the board of the Knowledge Acquisition Journal and the International Journal of Human-Computer Studies. He led the DARPA and NASA funded ITAC study team "Software Agents for the Warfighter." Among other publications, he edited the books Knowledge Acquisition as a Modeling Activity (with Ken Ford, Wiley, 1993), Software Agents (AAAI Press/The MIT Press, 1997).

Wednesday Keynote Address

Near Space-Optimal Perfect Hashing Algorithms

Prof. Dr. Nivio Ziviani
Professor Emeritus
Department of Computer Science
Federal University of Minas Gerais, Brazil

WEDNESDAY MARCH 19, 8:20 – 10:00AM
ROOM: SALÃO MASTER I

Abstract

Minimal perfect hash functions are widely used for memory efficient storage and fast retrieval of items from static sets. A perfect hash function (PHF) \( h : U \rightarrow [0, m – 1] \) for a key set \( S \) is a function that maps the keys of \( S \) to unique values. A minimal perfect hash function (MPHF) is a PHF with the smallest range, i.e., \( m = n \). The objective of this talk is to present two time efficient and near-space-optimal perfect hashing algorithms. We present: (1) an internal memory based algorithm that assumes uniform hashing to build a family of PHFs (for \( m = \lfloor 1.23n \rfloor \)) or MPHFs (for \( m = n \)) based on random graphs, and (2) an external memory based algorithm that has experimentally proven practicality for sets in the order of billions of keys. Both internal and external algorithms have the following properties: (i) evaluation of a PHF or a MPHF requires constant time, (ii) the algorithms are simple to describe and implement, and generate the functions in linear time, (iii) for the internal algorithm, the amount of space needed to represent a PHF is approximately 1.95n bits and a MPHF is approximately 2.62n bits, which is around a factor of 2 from the information theoretical minimum of approximately 0.89n and 1.44n bits, respectively; for the external algorithm, the amount of space needed to represent a PHF is approximately 2.7n bits and a MPHF is approximately 3.8n bits. To our knowledge, no previously known algorithm has these properties and any algorithm in the literature with the property (iii) either requires exponential time for construction and evaluation, or uses near-optimal space only asymptotically, for extremely large \( n \). The internal algorithm is used in one phase of the external algorithm. We demonstrate the scalability of the external algorithm by constructing MPHFs for a set of 1.024 billion URLs from the World Wide Web of average length 64 characters in approximately 62 minutes, using a commodity PC.

Nivio Ziviani has a Ph.D. in Computer Science from the University of Waterloo, Canada, 1982. He is a Professor Emeritus at the Department of Computer Science of the Federal University of Minas Gerais (UFMG), Brazil, where he coordinates the Laboratory for Treating Information (LATIN). He is a member of the Brazilian Academy of Sciences and of the National Order of the Scientific Merit.
in the class Comendador. He is a co-founder of Miner Technology Group, sold to Folha de São Paulo / UOL group in 1999, and Akwan Information Technologies, sold to Google Inc. in 2005. He has co-authored of over 100 refereed papers and 2 books in the areas of algorithm design and information retrieval, the latter his primary area of research. He was General Co-Chair of the 28th ACM SIGIR Conference on Research and Development in Information Retrieval and co-founder of the International Conference on String Processing and Information Retrieval (SPIRE).

Tutorials

Sunday March 16, 2008

9:00 - 17:00
Registration

8:30 - 12:00  (Coffee Break: 10:00 - 10:30)
AM Tutorials

T2: The Energy Role in the Design of Applications for Wireless Sensor Networks
Raquel A. F. Mini, PUCMinas, Brazil
Antonio A. F. Loureiro, UFMG, Brazil
ROOM: SALA TOM JOBIM

12:00 - 14:00
Lunch Break

14:00 - 17:30  (Coffee Break: 15:30 - 16:00)
PM Tutorials

T4: Virtual Instructors in Mixed Reality Environments
Jayfus T. Doswell, The Juxtopia Group & IEEE VIPRG, USA
ROOM: SALA FERNANDO PESSOA

T5: Model-Driven Architecture: Core Technologies, Models and Application
Luís F. Pires, University of Twente, Netherlands
Marten van Sinderen, University of Twente, Netherlands
João Paulo A. Almeida, Universidade Federal do Espírito Santo, Brazil
ROOM: SALA TOM JOBIM

T6: Database Replication and Clustering
Rui Oliveira, Universidade do Minho, Portugal
Luís Rodrigues, IST/INESC-ID, Portugal
José Pereira, Universidade do Minho, Portugal
ROOM: SALA IRACEMA

18:00 - 19:00
SAC Review Meeting
### Monday March 17, 2008

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<th>Time</th>
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<td>8:20 - 10:00</td>
<td>Salão Master I</td>
<td>Keynote Address</td>
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|            |            | **Cognitive, Robotic, and Social Prostheses: New Approaches for Augmenting Human Capabilities**  
Dr. Jeffrey M. Bradshaw  
Florida Institute for Human and Machine Cognition  
Pensacola, Florida, USA  
See details at page 5  |
| 10:00 - 10:30 | Lobby do Inódio | Coffee Break |

#### Mon. 10:30 - 12:10  
**ENG: Sala Fernando Pessoa**

**OE-1** Organizational Engineering  
José Tríbolet, Technical University of Lisbon

**Enterprise Ontology in Enterprise Engineering**  
Jan L.G. Dietz, Delft University of Technology, The Netherlands  
Jan Hoogervorst, Sogeti Nederland, The Netherlands

**Enterprise Ontology Based Splitting and Contracting of Organizations**  
Martin Op’t Land, Delft University of Technology, The Netherlands  
Jan L.G. Dietz, Delft University of Technology, The Netherlands

**Integrating Goal Modeling and Execution in Adaptive Complex Enterprises**  
Rajiv Ramnath, The Ohio State University, USA  
Jay Ramanathan, The Ohio State University, USA

**An Integrated View on Business - and IT-Architecture**  
Michael Rohloff, mri Management Consulting, Germany

**Enterprise Architecture Governance: The Need for a Business-to-IT Approach**  
Robert Winter, University of St. Gallen, Switzerland  
Joachim Schelp, University of St. Gallen, Switzerland

#### Mon. 10:30 - 12:10  
**IS: Sala Iracema**

**ASIIS** Advances in Spatial and Image-based Information Systems  
Agma J. M. Traina, University of Sao Paulo, Brazil

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**Selectivity Estimation in Spatial Networks**  
Eleftherios Tiakas, Aristotle University, Greece  
Apostolos Papadopoulos, Aristotle University, Greece  
Alexandros Nanopoulos, Aristotle University, Greece  
Yannis Manolopoulos, Aristotle University, Greece

**Aggregation Languages for Moving Object and Places of Interest**  
Leticia Gómez, Instituto Tecnolcogico de Buenos Aires, Argentina  
Bart Kuipers, Hasselt University & Transnational University, Belgium  
Alejandro Vaisman, Universidad de Buenos Aires, Argentina

**A Clustering-based Approach for Discovering Interesting Places in Trajectories**  
Andrey Tietbohl Palma, UFRGS, Brazil  
Vania Bogorany, Hasselt University & Transnational University, Belgium  
Bart Kuipers, Hasselt University & Transnational University, Belgium  
Luis Otavio Alvares, UFRGS, Brazil

**Aggregate Similarity Queries in Relevance Feedback Methods for Content-based Image Retrieval**  
Humberto Razente, University of São Paulo at São Carlos, Brazil  
Maria Camila N. Barioni, University of São Paulo at São Carlos, Brazil  
Agma J. M. Traina, University of São Paulo at São Carlos, Brazil  
Caetano Traina Jr., University of São Paulo at São Carlos, Brazil

**Spatial Vagueness and Imprecision in Databases**  
Alejandro Pauly, University of Florida, USA  
Markus Schneider, University of Florida, USA

#### Mon. 10:30 - 12:10  
**AIA: Sala Tom Jobim**

**CISIA-1** Computational Logic and Computational Intelligence in Signal and Image Analysis  
A Rosa, ISR-TUL

**Combination of Decomposability and Propagation for Solving First-Order Constraints in Decomposable Theories**  
Khalil Djelloul, laboratoire d’informatique fondamentale d’orleans, France

**Spatially Non-Homogeneous Potts Model Parameter Estimation on Higher-Order Neighborhood Systems by Maximum Pseudo-Likelihood**  
Alexandre L. M. Levada, Universidade de São Paulo, Brazil  
Nelson D. A. Mascarenhas, Universidade Federal de São Carlos, Brazil  
Alberto Tannús, Universidade de São Paulo, Brazil  
Denis H.P. Salvador, Universidade Federal de São Carlos, Brazil

**Neural Network Based Systems for Computer-Aided Musical Composition: Supervised x Unsupervised Learning**  
Débora C. Corrêa, Universidade Federal de São Carlos, Brazil  
Alexandre L. M. Levada, Universidade Federal de São Carlos, Brazil  
José H. Saito, Universidade Federal de São Carlos, Brazil  
João F. Mari, Universidade Federal de São Carlos, Brazil

**General Type-2 Fuzzy Classifiers to Land Cover Classification**  
Luís Alberto Lucas, UTFPR, Brazil  
Tania Mezzadri Centeno, UTFPR, Brazil  
Myriam Regattieri Delgado, UTFPR, Brazil
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<thead>
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<th>Time</th>
<th>Room</th>
<th>Session</th>
<th>Speaker(s)</th>
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<tr>
<td>Mon. 10:30 - 12:10</td>
<td>DS: Sala Vasco da Gama</td>
<td><strong>(WT-1) Web Technologies</strong></td>
<td>Lamy Kaya, Sharjah University, UAE</td>
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<td></td>
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<td>Consistent Privacy Preferences (CPP): Model, Semantics, and Properties</td>
<td>Peter Bodorik, Dalhousie University, Canada; Dawn Jutla, Saint Mary’s University, Canada; Mike Xuehai Wang, Dalhousie University, Canada</td>
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<td>Agent and Ontology based Information Gathering on Restricted Web Domains with AGATHE</td>
<td>Bernard Espinasse, Domaine Universitaire de St Jerôme, France; Sebastien Fourrier, Domaine Universitaire de St Jerôme, France; Frederico Freitas, Universidade Federal de Pernambuco, Brazil</td>
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<td>Modeling and Verifying BPEL Using Synchronized Net</td>
<td>Chunxiang Xu, Peking University, China; Hanpin Wang, Peking University, China; Wanling Qi, Peking University, China</td>
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<td>An Integrated Web System to Facilitate Personalized Web Searching Algorithms</td>
<td>Christos Makris, University of Patras, Greece; Yannis Panagis, University of Patras, Greece; Yannis Plegas, University of Patras, Greece; Evangelos Sakkopoulos, University of Patras, Greece</td>
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<td>Designing and Architecting Process-aware Web Applications with EPML</td>
<td>Davide Rossi, University of Bologna, Italy; Elisa Turrini, University of Bologna, Italy</td>
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<td>Mon. 10:30 - 12:10</td>
<td>SWD: Sala Amália Rodrigues</td>
<td><strong>(RTS-1) Real-Time Systems</strong></td>
<td>Leandro Becker, UFSC - DAS</td>
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<td>Multiprocessor Frequency Locking for Real-Time Task Synchronization</td>
<td>Ya-Shu Chen, National Taiwan University of Science and Technology, Taiwan; Li-Pin Chang, National Chiao-Tung University, Taiwan; Tei-Wei Kuo, National Taiwan University, Taiwan</td>
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<td>A Behavior Priority Driven Approach for Resource Reservation Scheduling</td>
<td>Leo Ordinez, Universidad Nacional del Sur - CONICET, Argentina; David Donari, Universidad Nacional del Sur - CONICET, Argentina; Rodrigo Santos, Universidad Nacional del Sur - CONICET, Argentina; Javier Orozco, Universidad Nacional del Sur - CONICET, Argentina</td>
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<td>The Utilization Bound of Uniprocessor Preemptive Slack-Monotonic Scheduling is 50%</td>
<td>Björn Andersson, Institute Polytechnic Porto, Portugal</td>
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<td>Evaluation of Priority Based Real Time Scheduling Algorithms: Choices and Tradeoffs</td>
<td>Biju Raveendran, Birla Institute of Technology and Science, INDIA; Sundar Balasubramaniam, BITS Pilani, INDIA; S Gurumurayanan, BITS Pilani, INDIA</td>
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<tr>
<td>Mon. 10:30 - 12:10</td>
<td>APP: Sala Eça de Queiroz</td>
<td><strong>(BIO-1) Bioinformatics</strong></td>
<td>Sergio Cruz, PESC/COPPE – UFRJ</td>
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<td>CReF: A Central-residue-fragment-based Method for Predicting Approximate 3-D Polypeptides Structures</td>
<td>Márcio Dorn, PUCRS, Brazil; Osmar Norberto de Souza, PUCRS, Brazil</td>
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<td>Mining Disease-Specific Molecular Association Profiles from Biomedical Literature: A Case Study</td>
<td>Jiao Li, Tsinghua University, China; Xiaoyan Zhu, Tsinghua University, China; Jake Chen, Indiana University - Purdue University Indianapolis, USA</td>
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<td>BOLOS: BLAST &amp; Ontology Linked-hOmologue Stars</td>
<td>Hugo Bastos, University of Lisbon, Portugal; Daniel Faria, University of Lisbon, Portugal; Catia Pesquita, University of Lisbon, Portugal; André Falcão, University of Lisbon, Portugal</td>
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<td>Computing H/D-Exchange Speeds of Single Residues from Data of Peptidic Fragments</td>
<td>Ernst Althaus, MPI für Informatik, Germany; Stefan Canzar, Universite Henri Poincare LORIA, France; Mark Emmett, Florida State University, USA; Andreas Karrenbauer, MPI für Informatik, Germany; Alan Marshall, Florida State University, USA; Anke Meyer-Baese, FAMU-FSU College of Engineering, USA; Huimin Zhang, Florida State University, USA</td>
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<td>FlagelLink: A Decision Support System for Distributed Flagellar Data Using Data Warehouse</td>
<td>Fabiana Araújo, Universidade Federal do Ceará, Brazil; Angela Pinheiro, Universidade Estadual do Ceará, Brazil; Kaio Farias, Universidade Estadual do Ceará, Brazil; Bernadette Lescio, Universidade Federal do Ceará, Brazil; Diana Oliveira, Universidade Estadual do Ceará, Brazil</td>
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<td>12:10 - 13:30</td>
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<td>Lunch Break</td>
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<td>Mon. 13:30 - 15:10</td>
<td>ENG: Sala Fernando Pessoa</td>
<td><strong>(OE-2) Organizational Engineering</strong></td>
<td>Robert Winter, University of St. Gallen</td>
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<td>Organizational Engineering in Public Administration: The State of the Art on eGovernment Domain Modeling</td>
<td>Vassiliki Peristeras, Digital Enterprise Research Institute, National University of Ireland, Ireland; Nikolaos Loutas, Center for Research and Technology Hellas, Greece; Konstantinos Tarabanis, University of Macedonia, Greece</td>
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<td>Designing IC Structures by Variety Engineering</td>
<td>Christoph Rosenkrantz, Johann Wolfgang Goethe University, Germany; Roland Holten, Johann Wolfgang Goethe University, Germany; Marcus Laumann, Arvato Services Healthcare, Germany</td>
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Redesigning Business Networks – Reference Process, Network and Service Map
Stefan Reitbauer, University of St. Gallen, Switzerland
Falk Kohlmann, University of Leipzig, Germany
Clemens Eckert, University of St. Gallen, Switzerland
Ken Mansfeldt, University of St. Gallen, Switzerland
Rainer Alt, University of Leipzig, Germany

Towards Self-Configuration and Management of e-Service Provisioning in Dynamic Value Constellations
Jaap Gordijn, Free University Amsterdam, The Netherlands
Hans Weigand, Tilburg University, The Netherlands
Manfred Reichert, University of Twente, The Netherlands
Roel Wieringa, University of Twente, The Netherlands

User Interface Derivation from Business Processes: A Model-Driven Approach for Organizational Engineering
Kénia Sousa, Université catholique de Louvain, Belgium
Hildeberto Mendonça, Université catholique de Louvain, Belgium
Jean Vanderdonckt, Université catholique de Louvain, Belgium
Els Rogier, Namahn, Belgium
Joannes Vandermeulen, Namahn, Belgium

Accurate Histogram-based XML Summarization
Jose de Aquiara Moraes Filho, University of Kaiserslautern, Germany
Theo Hárder, University of Kaiserslautern, Germany

Usage-based Ranking of Distributed XML Data
Camilia Constantin, Université Pierre et Marie Curie, France
Bernd Amann, Université Pierre et Marie Curie, France

XBird/D: Distributed and Parallel XQuery Processing using Remote Proxy
Makoto Yui, Nara Institute of Science and Technology, Japan
Jun Miyazaki, Nara Institute of Science and Technology, Japan
Shunsuke Uemura, Nara Sangyo University, Japan
Hirokazu Kato, Nara Institute of Science and Technology, Japan

Adaptive Weighted Multi-Criteria Fuzzy Query Processing for Web Based Real Estate Applications
Omer O. Işıkman, TOBB ETU, Turkey
Murat Odemir, TOBB ETU, Turkey
Harun Gökcü, TOBB ETU, Turkey
Baha G. Yalim, TOBB ETU, Turkey
Tansel Özyer, TOBB ETU, Turkey
Reda Alhajj, U of Calgary and Global U., Lebanon, Canada and Lebanon

Introducing Self-Adaptability into Transaction Processing
Maristela Holanda, Catholic University of Brasilia, Brazil
Angelo Brayner, University of Fortaleza, Brazil
Sergio Fialho, Federal University of Minas Gerais, Brazil

Using the RRT Algorithm to Optimize Classification Systems for Handwritten Digits and Letters
Paulo Vinicius Wolski Radtke, Pontificia Universidade Catolica do Parana, Brazil
Robert Sabourin, École de Technologie Supérieure, Canada
Tony Wong, École de Technologie Supérieure, Canada

Face Recognition Using DCT Coefficients Selection
Fabrizia Medeiros de Sousa Matos, COINFO / CEFET-PB, Brazil
Leonardo Vital Batista, PPGI / DI / UFPE, Brazil
Jankees v. d. Poli, PGPGI / DEM / UFPE, Brazil

A Nervous System Model for Direct Dynamics Animation Control Based on Evolutionary Computation
Yuri Lenon Barbosa Nogueira, Federal University of Ceará, Brazil
Creto Vidal, Federal University of Ceará, Brazil
Joaquim Cavalcante-Neto, Federal University of Ceará, Brazil

Replica Identification using Genetic Programming
Moises Carvalho, Federal University of Minas Gerais, Brazil
Alberto H. F. Laender, Federal University of Minas Gerais, Brazil
Marcos André Gonçalves, Federal University of Minas Gerais, Brazil
Altigran S. da Silva, Federal University of Amazonas, Brazil

Introducing Self-Adaptability into Transaction Processing
Maristela Holanda, Catholic University of Brasilia, Brazil
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On the Performance of Persistent Connection in Modern Web Servers
Xiao-zhu Lin, Tsinghua University, China
Hai-yan Wu, Tsinghua University, China
Jing-jun Zhu, Tsinghua University, China
Ying-xue Wang, Tsinghua University, China

Web Page Genre Classification
Guangyu Chen, Louisiana Tech University, USA
Ben Choi, Louisiana Tech University, USA

Towards an Integrative Human Pathway Database for Systems Biology Applications
Harini Kasamsetty, Indiana University School of Informatics, USA
Xiaogang Wu, Indiana University School of Informatics, USA
Jake Chen, Indiana University - Purdue University Indianapolis, USA

Strangeness-based Feature Weighting and Classification of Gene Expression Profiles
Haifeng Shao, Case Western Reserve University, USA
Bei Yu, Northwestern University, USA
Joseph Nadeau, Case Western Reserve University, USA

Computational Approach to Biological Validation of Protein-Protein Interactions Discovered using Literature Mining
Anna Antony, Indiana University Purdue University, USA
Srilaxmi Basetty, IUPUI, USA
Shelly Hartzanto, IUPUI, USA
Mathew Palakal, IUPUI, USA

A Wireless Hybrid Contention/TDMA-based MAC for Real-Time Mobile Applications
Marcelo Sobral, Federal University of Santa Catarina, Brazil
Leandro Becker, Federal University of Santa Catarina, Brazil

Towards a Model-Driven Engineering Approach for Developing Embedded Hard Real-Time Software
Fabiano Cruz, Nokia Institute of Technology (INDT) and Universidade Federal do Amazonas, Brazil
Raimundo Barreto, Universidade Federal do Amazonas, Brazil
Lucas Cordeiro, Universidade Federal do Amazonas, Brazil
Paulo Maciel, Universidade Federal de Pernambuco, Brazil

Scheduling Distributable Real-time Threads in the Presence of Crash Failures and Message Losses
Sherif Fahmy, Virginia Tech, USA
Binoy Ravindran, Virginia Tech, USA
Douglas Jensen, MITRE Corporation, USA

A Coordination Models, Languages and Applications
Michael Schumacher, University of Applied Sciences Western Switzerland

Towards Trace Semantics for WS-CDL with Alignments
Yahui Lu, Tsinghua University, P.R.China
Li Zhang, Tsinghua University, P.R.China
Jiaguang Sun, Tsinghua University, P.R.China

Framework Composition Conformance via Refinement Checking
Rodrigo Ramos, Federal University of Pernambuco, Brazil
Augusto Sampaio, Federal University of Pernambuco, Brazil
Alexandre Mota, Federal University of Pernambuco, Brazil

Decentralized Web Service Orchestration: A Reflective Approach
Ricardo Jiménez-Peris, Universidad Politécnica de Madrid, Spain
Marta Patino-Martinez, Universidad Politécnica de Madrid, SPAIN
Ernestina Martel, Universidad de las Palmas de Gran Canaria, Spain

OrthoSearch: A Scientific Workflow Approach to Detect Distant Homologies on Proteoazns
Sergio Cruz, PESC/COPPE - UFRJ, Brazil
Vanessa Batista, COPPE - Federal University of Rio de Janeiro, Brazil
Alberto Dávila, Oswaldo Cruz Institute - Fiocruz, Brazil
Edno Silva, COPPE - Federal University of Rio de Janeiro, Brazil
Frederico Tosta, COPPE - Federal University of Rio de Janeiro, Brazil
Clarissa Vilela, COPPE - Federal University of Rio de Janeiro, Brazil
Maria Luiza Machado Campos, Federal University of Rio de Janeiro, Brazil
Rafael Cuadrat, Oswaldo Cruz Institute - Fiocruz, Brazil
Diogo Tschocke, Oswaldo Cruz Institute - Fiocruz, Brazil
Marta Mattoso, COPPE - Federal University of Rio de Janeiro, Brazil

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Frederico Tosta, COPPE - Federal University of Rio de Janeiro, Brazil
Clarissa Vilela, COPPE - Federal University of Rio de Janeiro, Brazil
Maria Luiza Machado Campos, Federal University of Rio de Janeiro, Brazil
Rafael Cuadrat, Oswaldo Cruz Institute - Fiocruz, Brazil
Diogo Tschocke, Oswaldo Cruz Institute - Fiocruz, Brazil
Marta Mattoso, COPPE - Federal University of Rio de Janeiro, Brazil

Dynamic Support to Transactional Remote Invocations over Multiple Transports
Francisco Reverbel, University of São Paulo, Brazil
Ivan Silva Neto, University of São Paulo, Brazil

Towards a Service-Based Middleware Layer for Runtime Environments
Abdulkalim Al-Gahmi, New Mexico State University, USA
Jonathan Cook, New Mexico State University, USA

Context-Aware Middleware Architecture for Vertical Handover Support to Multi-homed Nomadic Mobile Services
Pravin Pawar, University of Twente, The Netherlands
Katarzyna Wae, University of Geneva, Switzerland
Pierre Maret, Institut National des Sciences Appliquées de Lyon, France
Aart van Halteren, Philips Research, The Netherlands
Hermie Hermens, University of Twente, The Netherlands

Middleware of Taiwan UniGrid
Po-Chi Shih, National Tsing Hua University, Taiwan
Hsi-Min Chen, National Central University, Taiwan
Yeh-Ching Chung, National Tsing Hua University, Taiwan
Chien-Min Wang, Academia Sinica, Taiwan
Ruay-Shuang Chang, National Dong Hwa University, Taiwan
Ching-Heien Hsu, Chung Hua University, Taiwan
Kuo-Chan Huang, National Tsing Hua University, Taiwan
Chao-Tung Yang, Tunghai University, Taiwan

Towards an Integrative Human Pathway Database for Systems Biology Applications
Harini Kasamsetty, Indiana University School of Informatics, USA
Xiaogang Wu, Indiana University School of Informatics, USA
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Strangeness-based Feature Weighting and Classification of Gene Expression Profiles
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Computational Approach to Biological Validation of Protein-Protein Interactions Discovered using Literature Mining
Anna Antony, Indiana University Purdue University, USA
Srilaxmi Basetty, IUPUI, USA
Shelly Hartzanto, IUPUI, USA
Mathew Palakal, IUPUI, USA

**DTTA-2** Database Theory, Technology, and Applications
Junning Sun, Nova Southeastern University

**History Offset Implementation Scheme for Large Scale Multidimensional Data Sets**
Tatsuo Tsuji, University of Fukui, Japan
Masayuki Karoda, University of Fukui, Japan
Ken Higuchi, University of Fukui, Japan

**Managing Data Quality in a Terabyte-scale Sensor Archive**
Bryce Cutt, University of British Columbia Okanagan, Canada
Ramon Lawrence, University of British Columbia Okanagan, Canada

**Online Detection of Malicious Data Access Using DBMS Auditing**
José Fonseca, University of Coimbra, Portugal
Marco Vieira, University of Coimbra, Portugal
Henrique Madeira, University of Coimbra, Portugal

**A QoS-oriented External Scheduler**
Rogério Luís de Carvalho Costa, University of Coimbra, Portugal
Pedro Furtado, University of Coimbra, Portugal

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**EC-2** Applications of Evolutionary Computation
Moise’s Carvalho, Federal University of Minas Gerais

**Dynamic Populations in Genetic Algorithms**
Zhanshan (Sam) Ma, University of Idaho, USA
Axel Krings, University of Idaho, USA

**A GA-based Feature Selection and Parameters Optimization for Support Vector Regression Applied to Software Effort Estimation**
Petrório Braga, Pernambuco State University, Brazil
Adriano Oliveira, Pernambuco State University, Brazil
Silvio Meira, Federal University of Pernambuco & C.E.S.A.R., Brazil

**Evaluating Genetic Algorithms with Different Population Structures on a Lot Sizing and Scheduling Problem**
Claudio Toledo, Universidade Federal de Lavras, Brazil
Paulo França, Universidade Estadual Paulista, Brazil
Kaliane Rosa, Universidade Federal de Lavras, Brazil

**A Performance Comparison of PSO and GA in Scheduling Hybrid Flow-shops with Multiprocessor Tasks**
M Fikret Ercan, Singapore Polytechnic, Singapore

**Dynamically Tuning the Population Size in Particle Swarm Optimization**
André Coelho, University of Fortaleza, Brazil
Daniel de Oliveira, University of Fortaleza, Brazil

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**CM-2** Coordination Models, Languages and Applications
Alan Wood, University of York

**A Formal Architectural Model for Exception Handling Coordination**
David P. Pereira, University of São Paulo, Brazil
Ana C. V. de Melo, University of São Paulo, Brazil

**Model and Infrastructure for Decentralized Workflow Enactment**
Daniel Wutke, University of Stuttgart, Germany
Paulo França, Universidade Estadual Paulista, Brazil

**Workflow Management versus Case Handling: Results from a Controlled Software Experiment**
Bela Mutschler, Daimler Group Research, Germany
Barbara Weber, University of Innsbruck, Austria
Manfred Reichert, University of Twente, The Netherlands

**Decision-Making Coordination in Collaborative Product Configuration**
Marcílio Mendonça, University of Waterloo, Canada
Thiago Bartolomei, University of Waterloo, Canada
Donald Cowan, University of Waterloo, Canada

**Data Sharing vs. Message Passing: Synergy or Incompatibility? An Implementation-Driven Case Study**
Matteo Ceriotti, FBK-IRST & University of Trento, Italy
Amy L. Murphy, FRK-IRST & University of Lugano, Italy
Gian Pietro Picco, University of Trento, Italy

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**WT-3** Web Technologies
Lamy Kaya, Sharjah University, UAE

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**Final Program**

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**SAC 2008, March 16 – 20, 2008**
Tuesday March 18, 2008

TUE. 08:20 - 10:00  ENG: SALA FERNANDO PESSOA

(ELSDS) Engineering Large-Scale Distributed Systems
Claudio Lucchese, HPC Lab. ISTI-CNR

Extending Peer-to-Peer Networks for Approximate Search
Alain Mowat, Ecole Polytechnique Fédérale de Lausanne, Switzerland
Roman Schmidt, Ecole Polytechnique Fédérale de Lausanne, Switzerland
Michael Schumacher, University of Applied Sciences Western Switzerland, Switzerland
Ion Constantinescu, Digital Optim, USA

Knowledge-based Semantic Clustering
John Keeney, Trinity College Dublin, Ireland
Dominic Jones, Trinity College Dublin, Ireland
David Lewis, Trinity College Dublin, Ireland
Declan O’Sullivan, Trinity College Dublin, Ireland

Processing Complex Similarity Queries in Peer-to-Peer Networks
Claudio Gennaro, ISTI-CNR, Italy
Matteo Mordacchini, ISTI-CNR, Italy
Salvatore Orlando, ISTI-CNR & Università Ca’ Foscari di Venezia, Italy
Fausto Rabitti, ISTI-CNR, Italy

A Pull-based e-mail Architecture
Edson Kagaya, PUCPR, Brazil
Carlos Maziero, PUCPR, Brazil
Altair Santin, PUCPR, Brazil

TUE. 08:20 - 10:00  IS: SALA IRACEMA

(IAR-1) Information Access and Retrieval
Gabriella Pasi, University of Milano Bicocca

XEdge: Clustering Homogeneous and Heterogeneous XML Documents Using Edge Summaries
Panagiotis Antonellis, University of Patras, Greece
Christos Makris, University of Patras, Greece
Nikos Tairakis, University of Patras, Greece

Entity Ranking in Wikipedia
Anne-Marie Vercoustre, INRIA, France
James A. Thom, RMIT University, Australia
Jovan Pecevski, INRIA, France

Semantic Mapping and K-means Applied to Hybrid SOM-Based Document Organization System Construction
Renato Corrêa, Federal University of Pernambuco, Brazil
Teresa Ludermir, UFPE - Federal University of Pernambuco, Brazil

A Graph-based Profile Similarity Calculation Method for Collaborative Information Retrieval
Hassan Naderi, Bâtiment Blaise Pascal, France
Béatrice Rumppler, Bâtiment Blaise Pascal, France
Jean-Marie Pinon, Bâtiment Blaise Pascal, France

Enabling Ontology-based Document Classification and Management in ebXML Registries
Alessio Bechini, University of Pisa, Italy
Andrea Tomasi, University of Pisa, Italy
Jacopo Viotto, University of Pisa, Italy

Ontology-based WOM Extraction Service from Weblogs
Takahiro Kawamura, Toshiba Corp., Japan
Shinichi Nagano, Toshiba Corp., Japan
Yumiko Mizoguchi, Toshiba Corp., Japan
Masaumi Inaba, Toshiba Corp., Japan
Tomohiro Yamasaki, Toshiba Corp., Japan
Masayuki Okamoto, Toshiba Corp., Japan

Pattern Ranking for Semi-automatic Ontology Construction
Eva Blomqvist, School of Engineering, Jönköping University, Sweden

Enabling Ontology-based Document Classification and Management in ebXML Registries
Alessio Bechini, University of Pisa, Italy
Andrea Tomasi, University of Pisa, Italy
Jacopo Viotto, University of Pisa, Italy

A Location-aware Information Browser Implemented on BREW-based Mobile Phones
Yoshihide Hosokawa, Nagoya Institute of Technology, Japan

iVESTA: An Interactive Visualization and Evaluation System for Drive Test Data
Yongsuk Lee, Florida Atlantic University, USA
Xingquan Zhu, Florida Atlantic University, USA
Ahbujit Pandya, Florida Atlantic University, USA
Sam Hsu, Florida Atlantic University, USA

An Audio Wiki Supporting Mobile Collaboration
Lei Wang, Queensland University of Technology, Australia
Paul Roe, Queensland University of Technology, Australia
Binh Pham, Queensland University of Technology, Australia
Dian Tjondronegoro, Queensland University of Technology, Australia

An Approach to Mobile Collaborative Mapping
Chien Jun Soon, Queensland University of Technology, Australia
Paul Roe, Queensland University of Technology, Australia
Dian Tjondronegoro, Queensland University of Technology, Australia

Ubicomp Secretary: A Web Service based Ubiquitous Computing Application
Salim Sultana, Comlink Info Tech. Ltd., Bangladesh
Rezana Karim, BRAC University, Bangladesh
Md. Mostofa Akbar, BUET, Bangladesh
Sheikh Ahamed, Marquette University, USA

Expanding Social Annotations for Web Document Classification
Michael Noll, Hasso-Plattner-Institut, University of Potsdam, Germany
Christoph Meinel, Hasso-Plattner-Institut, University of Potsdam, Germany

Applying Markup Language Resources in the Specification of Visual Alphabets and Visual Sentences
Tiago Lopes Teleckcn, Universidade Federal do Rio Grande do Sul, Brazil
Ethan V. Munson, University of Wisconsin Milwaukee, USA
José Valdeni de Lima, Universidade Federal do Rio Grande do Sul, Brazil

Ubicomp Secretary: A Web Service based Ubiquitous Computing Application
Salim Sultana, Comlink Info Tech. Ltd., Bangladesh
Rezana Karim, BRAC University, Bangladesh
Md. Mostofa Akbar, BUET, Bangladesh
Sheikh Ahamed, Marquette University, USA

Exploring Social Annotations for Web Document Classification
Michael Noll, Hasso-Plattner-Institut, University of Potsdam, Germany
Christoph Meinel, Hasso-Plattner-Institut, University of Potsdam, Germany

An Architecture of Services for Session Management and Contents Adaptation in Ubiquitous Medical Environments
Juliana R. Basto Diniz, Federal University of Pernambuco, Brazil
Carlos André Guimarães Ferraz, Federal University of Pernambuco, Brazil
Hildeberto Melo, FJR, Brazil

Medical Image Analysis using Mobile Devices
Bruno Correia, Military Institute of Engineering (IME), Brazil
Edison Ishikawa, Military Institute of Engineering (IME), Brazil
Artur Zeviani, National Laboratory for Scientific Computing (LNCC), Brazil
Marcelo Faria, Federal University of Rio de Janeiro (UFRJ), Brazil

Wanderley Lopes De Souza, Federal University of São Carlos, Brazil
Carlos André Guimarães Ferraz, Federal University of Pernambuco, Brazil
Marcelo Faria, Federal University of Rio de Janeiro (UFRJ), Brazil
Juliana R. Basto Diniz, Federal University of Pernambuco, Brazil
Antonio Francisco do Prado, Universidade Federal de São Carlos, Brazil

A Ubiquitous Computing Environment for Medical Education
Helen de Freitas Santos, Federal University of São Carlos, Brazil
Lydia Santana, Federal University of São Carlos, Brazil
Diogo Martins, Universidade Federal de São Carlos, Brazil
Wanderley Lopes De Souza, Federal University of São Carlos, Brazil
Antonio Francisco do Prado, Universidade Federal de São Carlos, Brazil
Mauro Biajiz, Universidade Federal de São Carlos, Brazil

ECG Data Provisioning for Telehomecare Monitoring
Bernardo Gonçalves, UFES, Brazil
José G. Pereira Filho, UFES, Brazil
Rodrigo V. Andrade, UFES, Brazil
Giancarlo Guizzardi, UFES & ISTC-CNR, Brazil & Italy

10:00 - 10:30 COFFEE BREAK

TUE. 10:30 - 12:10 ENG: SALA FERNANDO PESSOA

(SE-1) Software Engineering
Eric Wong, University of Texas at Dallas

SoftMon: Programmable Software Monitoring with Minimum Overhead by Helper-Threading
Yung-Pin Cheng, National Taiwan Normal University, Taiwan
Han-Shu Chen, National Taiwan Normal University, Taiwan

Scenario Oriented Program Slicing
Ju Qian, Southeast University, China
Baowen Xu, Southeast University, China

On the Conformity of Models: A Transducer-based Approach for Model Transformation
El Abbassia Deba, Paul Sabatier University, France

Automatic Test Data Generation Using Particle Systems
Paulo Bueno, Renato Archer Research Center, Brazil
Eric Wong, University of Texas at Dallas, USA
Mario Jino, State University of Campinas, Brazil

Adaptive Caching With Heterogeneous Devices in Mobile Peer to Peer Network
Fan Ye, University of Science & Technology of China, City University of Hong Kong, China
Qing Li, City University of Hong Kong, China
EnHong Chen, University of Science & Technology of China, China
A Remote Display System for Java-based Mobile Applications
Andre Tavares, Pontifícia Universidade Católica de Minas Gerais, Brazil
Marco Tulio Valente, PUC Minas, Brazil

Efficient Compilation of Lua for the CLR
Fabio Mascarenhas, PUC-Rio, Brazil
Roberto Jerusalemch, PUC-Rio de Janeiro, Brazil

TUE. 10:30 - 12:10 DS: SALA VASCO DA GAMA
(SWA-2) The Semantic Web and Applications
Sangsoo Sung, Google Inc.

Designing Semantic Web Services using Conceptual Model
Martin Necasky, Charles University, Czech Republic
Jaroslav Pokorny, Charles University, Czech Republic

Semantic Web Services Selection Improved by Application Ontology with Multiple Concept Relations
Xia Wang, DERI, Ireland
Manfred Hauswirth, DERI, Ireland
Tomas Vitvar, DERI, Ireland
Maciej Zaremba, DERI, Ireland

Optimized Dynamic Semantic Composition of Services
Sorin M. Iacob, Thales Research and Technology, D-CIS lab, The Netherlands
João Paulo A. Almeida, Federal University of Espírito Santo, Brazil
Maria E. Iacob, University of Twente, The Netherlands

Towards the Composition of Stateful and Independent Semantic Web Services
Freddy Lécué, École Nationale Supérieure des Mines de Saint-Étienne, France
Alexandre Delteil, France Telecom R&D, France
Alain Léger, France Telecom R&D, France

Web Service Security Management Using Semantic Web Techniques
Diego Garcia, University of Campinas, Brazil
Maria Beatriz Féligar de Toledo, University of Campinas, Brazil

TUE. 10:30 - 12:10 SWD: SALA AMÁLIA RODRIGUES
(PL-2) Programming Languages
Bostjan Slivnik, University of Ljubljana

IELR(1): Practical LR(1) Parser Tables for Non-LR(1) Grammars with Conflict Resolution
Joel Denny, Clemson University, USA
Brian Malloy, Clemson University, USA

Optimizing Code Through Iterative Specialization
Minhaj Ahmad Khan, Univ. of Versailles, France
Henri-Pierre Charles, Univ. of Versailles, France
Denis Barthou, Univ. of Versailles, France

Improving Flow-Insensitive Solutions for Non-Separable Dataflow Problems
Subhajit Roy, Indian Institute of Science, India
Y. N. Srikant, Indian Institute of Science, India

Flexible Pointer Analysis Using Assign-Fetch Graphs
Marcio Buss, Columbia University, USA
Daniel Brand, IBM T.J. Watson Research Center, USA
Vugraman Sreedhar, IBM T.J. Watson Research Center, USA
Stephen Edwards, Columbia University, USA

TUE. 10:30 - 12:10 APP: SALA EÇA DE QUEIROZ
(CAHC-2) Computer Applications in Health Care
Fátima Nunes, Centro Universitário Eurípides de Marília (Univem)

HIV Drug Resistance Analysis Tool Based on Process Algebra
Luciano Araújo, University of São Paulo, Brazil
Ester Sabino, University of São Paulo, Brazil
João Ferreira, University of São Paulo, Brazil

CPRM: A Chronic Patient’s Management Model Based on the Concepts of Customer’s Relationship
Márcia Ito, CEETEPS, Brazil
José S. C. Martini, São Paulo University, Brazil
Lúcia C. Iochida, Federal University of São Paulo, Brazil

Accessing and Aggregating Legacy Data Sources for Healthcare Research, Delivery and Training
Mark Slaymaker, Oxford University Computing Laboratory, UK
David Power, Oxford University Computing Laboratory, UK
Douglas Russell, Oxford University Computing Laboratory, UK
Graeme Wilson, Oxford University Computing Laboratory, UK
Andrew Simpson, Oxford University Computing Laboratory, UK

Jacques Wainer, Universidade Estadual de Campinas, Brazil
Cleo Zanella Billa, UNICAMP, Brazil
Marcio P. Dantas, UNICAMP, Brazil
Cleo Zanella Billa, UNICAMP, Brazil

Learning Activities on Health Care Supported by Common Sense Knowledge
Aparecido Fabiano Pinatti de Carvalho, Federal University of São Carlos, Brazil
Junia Coutinho Anacleto, Federal University of São Carlos, Brazil
Silvia Zem-Mascarenhas, Federal University of São Carlos, Brazil

12:10 - 13:30 SAC General Luncheon

TUE. 14:00 – 17:00 SALA VINCIUS DE MORAES
Poster Session 2

Posters of the following tracks: ACS, APSLA, ATOS, CAHC, DADS, DE, DM, EIS, EMBS, GCR, IAR, MCA, NLSP, RE, SWA (see the detailed list of posters at page 31.)

TUE. 13:30 - 15:10 ENG: SALA FERNANDO PESSOA
(SE-2) Software Engineering
Eric Wong, University of Texas at Dallas
### A Small Extension to Java for Class Refinement
Muga Nishizawa, Tokyo Institute of Technology, Japan
Shigeru Chiba, Tokyo Institute of Technology, Japan

### Integrating Coercion with Subtyping and Multiple Dispatch
J.J. Hallett, Boston University, USA
Victor Luchangco, Sun Microsystems Laboratories, USA
Sukyoung Ryu, Sun Microsystems Laboratories, USA
Guye Steele, Sun Microsystems Laboratories, USA

### Runtime Concepts for the C++ Standard Template Library
Peter Pirkelbauer, Texas A&M University, USA
Sean Parent, Adobe Inc., USA
Mat Marcus, Adobe Systems Inc., USA
Bjarne Stroustrup, Texas A&M University, USA

### Lambda Functions for C++0x
Jaakko Jarvi, Texas A&M University, USA
John Freeman, Texas A&M University, USA

### Pentagons: A Weakly Relational Abstract Domain for the Efficient Validation of Array Accesses
Francesco Logozzo, Microsoft Research, USA
Manuel Fähndrich, Microsoft Research, USA

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<tr>
<td>Tue. 13:30 - 15:10</td>
<td>APP: Sala Eça de Queiroz</td>
<td>(CAHC-3) Computer Applications in Health Care</td>
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<td>Márcia Ito, Centro Estadual de Educação Tecnológica Paula Souza</td>
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<td></td>
<td>The Virtual Reality Challenges in the Health Care Area: A Panoramic View</td>
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<td>Fátima Nunes, Centro Universitário Eurípedes de Marília, Brazil</td>
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<td>Rosa Maria E. M. Costa, Universidade do Estado do Rio de Janeiro, Brazil</td>
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<td>Augmented Vision for Medical Applications</td>
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<td>Daniela Trevisan, Universidade Federal do Rio Grande do Sul, Brazil</td>
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<td>Luciana Nedel, Universidade Federal do Rio Grande do Sul, Brazil</td>
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<td>Benoit Maqz, Université catholique de Louvain, Belgium</td>
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<td>A Web-based System for the Collection and Analysis of Spectra Signals for Early Detection of Voice Alterations</td>
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<td>Francesco Amato, University of Catanzaro, Italy</td>
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<td>Mario Cannataro, University of Catanzaro, Italy</td>
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<td>Carlo Coesentino, University of Catanzaro, Italy</td>
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<td>Francesco Montecinoso, University of Catanzaro, Italy</td>
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<td>Giuseppe Tradigo, University of Catanzaro, Italy</td>
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<td>Pierangelo Veltri, University of Catanzano, Italy</td>
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<td>Aldo Garozzo, University of Catanzano, Italy</td>
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<td>Nicola Lombardo, University of Catanzano, Italy</td>
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<td>Sergio Greco, University of Calabria, Italy</td>
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<td>Claudia Manfredi, University of Firenze, Italy</td>
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<td>Parametric C spectral Analysis for Pathological Voice Assessment</td>
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<td>Silvana Cunha Costa, Federal University of Campina Grande, Brazil</td>
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<td>Benedito Aguia Neto, Federal University of Campina Grande - UFCG, Brazil</td>
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<td>Joseane Fehine, Federal University of Campina Grande, Brazil</td>
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<td>Suzete Correia, Federal Center of Technological Education of Paraiba, Brazil</td>
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<td>Brain Registration and Subtraction - Improved Localization for SPECT Analysis (B.R.A.S.I.L.): A Computer-aided Diagnosis in Epilepsy Tool Kit</td>
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<td>Lucas Ferrari de Oliveira, Federal University of Pelotas, Brazil</td>
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<td>Paulo Mazzocchini Azevedo-Manques, FMMP - UFPB, Brazil</td>
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<td>Lauro Wichert-Ana, CIREP-HPFCMP-UPF, Brazil</td>
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<td>Américo Ceiki Sakamoto, FMMP-UPF, Brazil</td>
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<th>Time</th>
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<tr>
<td>Tue. 15:40 - 17:20</td>
<td>Lobby do Indió</td>
<td>(SE-3) Software Engineering</td>
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<td></td>
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<td>Sung Y. Shin, South Dakota University</td>
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<td>Modular Java Web Applications</td>
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<td>Simon Kaege, IBM, Canada</td>
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<td>Dwight Deugo, Carleton University, Canada</td>
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<td>An Environment for the Rapid Development of Embedded File Systems</td>
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<td>Fábio de la Rocha, Federal University of Santa Catarina, Brazil</td>
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<td>Rômulo Silva de Oliveira, Federal University of Santa Catarina, Brazil</td>
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<td>A Pattern to Design Crosscutting Frameworks</td>
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<td>Valter Camargo, UNIVEM, Brazil</td>
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<td>Paulo Masiero, University of Sao Paulo at Sao Carlos, Brazil</td>
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<td>Design Pattern Detection By Template Matching</td>
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<td>Jing Dong, University of Texas at Dallas, USA</td>
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<td>Yongtao Sun, American Airlines, USA</td>
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<td>Yajing Zhao, University of Texas at Dallas, USA</td>
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<td>Software Frameworks for Information Systems Integration based on Web Services</td>
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<td>Mateus Barcelos Costa, DCC - UFMG, Brazil</td>
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<td>Rodolfo Ferreira Resende, DCC/UFMG, Brazil</td>
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<td>Eduardo Freire Nakamura, FUCAP, Brazil</td>
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<td>Marcelo Vieira Segatto, DEL - UFS, Brazil</td>
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<td>A Lifecycle Approach to SOA Governance</td>
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<td>T.G.J. Schepers, Deloitte, The Netherlands</td>
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<td>Maria E. Iacob, University of Twente, The Netherlands</td>
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<td>P.A.T. Van Eck, University of Twente, The Netherlands</td>
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<td>MDSD Light for ERP</td>
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<td>Stephan Roser, University of Augsburg, Germany</td>
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<td>Florian Lautenbacher, University of Augsburg, Germany</td>
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<td>Bernhard Bauer, University of Augsburg, Germany</td>
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<td>Designing Interaction Behaviour in Service-Oriented Enterprise Application Integration</td>
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<td>Teduh Dirghayu, University of Twente, The Netherlands</td>
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<td>Dick Quartel, Telematica Instituut, The Netherlands</td>
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<td>Marten van Sinderen, University of Twente, The Netherlands</td>
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<td>A Model-based Semi-Quantitative Approach for Evaluating Security of Enterprise Networks</td>
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<td>Zonghua Zhang, INRIA Futurs, France</td>
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<td>Farid Naut-Abdesselam, INRIA Futurs, France</td>
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<td>Xiaodong Lin, University of Waterloo, Canada</td>
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<td>Pin-Han Ho, University of Waterloo, Canada</td>
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<td>Enterprise Systems Modeling: the ERP5 Development Process</td>
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<td>Rafael Monnerat, CEFET Campos, Brazil</td>
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<td>Rogerio de Carvalho, CEFET Campos, Brazil</td>
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<td>Renato de Campos, UNESP, Brazil</td>
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<td>Enterprise Information Systems</td>
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<td>Rogerio Atem de Carvalhal, Cefet Campos, Brazil and IFIP</td>
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<td>Enterprise Information Systems Working Group</td>
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</tbody>
</table>

(ATOS) Adaptive Techniques in Operating Systems
Jimian Hong, Soongsil University

Kernel-Mode Scheduling Server For CPU Partitioning
Michael Schöbel, Hasso Plattner Institute, Germany
Andreas Pulze, Hasso-Plattner-Institute, Germany

A Group Management Scheme for an Efficient Location-Based Service
Junghoon Lee, Cheju National University, Korea
Gyung-Leen Park, Cheju National University, Republic of Korea
Chang Oan Sung, Indiana University Southeast, USA
Sang-Wook Kim, Hanyang University, Republic of Korea

Secure Deletion for NAND Flash File System
Jaeheung Lee, Seoul National University, South Korea
Junyoung Heo, Seoul National University, Korea
Yookun Cho, Seoul National University, Korea
Jimian Hong, Soongsil University, Korea
Sung Y. Shin, South Dakota University, USA

A Self-Balancing Striping Scheme for NAND-Flash Storage Systems
Yu-Bin Chang, National Chiao-Tung University, Taiwan
Li-Pin Chang, National Chiao-Tung University, Taiwan

Expected Energy Consumption Minimization in DVS Systems with Discrete Frequencies
Jian-Jia Chen, Swiss Federal Institute of Technology, Switzerland

(SWA-4) The Semantic Web and Applications
Ramez Elmasri, University of Texas at Arlington

Towards Design Patterns for Ontology Alignment
François Xariffe, University of Innsbruck, Austria
Jérôme Euzenat, INRIA, France
Dieter Fensel, University of Innsbruck, Austria

Efficient Concept Clustering for Ontology Learning using an Event Life Cycle on the Web
Sangsoo Sung, Google Inc., USA
Seokkyung Chung, Yahoo! Inc., USA
Dennis McCleod, University of Southern California, USA

Similarity Estimation Module for OWSCIS
Thibault Poulin, Laboratoire LE2I, France
Nadine Cullot, Laboratoire LE2I, France
Kokou Yéronton, Laboratoire LE2I, France

Extending an Ontology-based Search with a Formalism for Spatial Reasoning
Rolf Grütter, Swiss Federal Research Institute WSL, Switzerland
Bettina Bauer-Messner, Swiss Federal Research Institute WSL, Switzerland
Martin Hägele, Swiss Federal Research Institute WSL, Switzerland

A System for Modal and Deontic Defeasible Reasoning
Grigoris Antoniou, FORTH-ICS, Greece
Nikos Dimaresis, FORTH-ICS, Greece
Guido Governatori, University of Queensland, Australia

(APSLA) Agent-Oriented Programming, Systems, Languages and Applications
Eric Platon, Université de Paris 6 - France

Profile Based Comparative Analysis for AOSE Methodologies Evaluation
Luca Cernuzzi, Universidad Católica “Nuestra Señora de la Asunción”, Paraguay
Franco Zambonelli, DIMSI - University di Modena e Reggio Emilia, Italy

Traceability and Completeness Checking for Agent-Oriented Systems
Gilberto Cysneiros, City University London, United Kingdom
Andrea Zisman, City University, United Kingdom

Contextualizing Normative Open Multi-Agent Systems
Carolina Howard Felicissimo, DI-PUC-Rio & LIP6-PARIS6, Brazil
Caroline Chopinaud, LIP6-PARIS6, France
Jean-Pierre Briot, DI-PUC-Rio & LIP6-PARIS6, France
Amal El Fallah Seghrouchni, LIP6-PARIS6, France
Carlos José Pereira de Lucena, DI-PUC-Rio, Brazil

Dynamic Resource Allocation Heuristics for Providing Fault Tolerance in Multi-agent Systems
Alessandro De Luna Almeida, Université Pierre et Marie Curie, France
Samir Akinne, Université Pierre et Marie Curie, France
Jean-Pierre Briot, Université Pierre et Marie Curie, France

A UMLS Interoperable Solution to Support Collaborative Diagnosis Decision Making over the Internet
Daniel Pires, Faculdades COC, Brazil
Cesar Teixeira, Universidade Federal de Sao Carlos, Brazil
Evandro Ruiz, Columbia University, USA

Compressing Electrocardiogram Signals Using Parameterized Wavelets
Cristiano Agulhari, Telematics Department, FECC - Unicamp, Brazil
Rosanna Silveira, National Institute of Telecommunications, Brazil
Evandro Ruiz, Columbia University, USA

Encephalic NMR Image Analysis By Textural Interpretation
Danilo Avola, IRPPS-CNR, Italy
Luigi Cinque, University of Rome “La Sapienza”, Italy

Eyelid Measurements Using Digital Video Processing
Carlos Morimoto, University of São Paulo, Brazil
Thomaz Oliveira, University of São Paulo, Brazil
Segmentation Technique for Detecting Suspect Masses in Dense Breast Digitized Images as a Tool for Mammography CAD Schemes
Homero Schiabel, Universidade de São Paulo, Brazil
Vivian T. Santos, LAPIMO - EESC/USP, Brazil
Michele F. Angelo, LAPIMO - EESC/USP, Brazil

TUE. 18:00 - 19:00
SIGAPP Annual Business Meeting

Wednesday March 19, 2008

WED. 8:20 - 10:00
SALÃO MASTER I
Keynote Address

Near Space-Optimal Perfect Hashing Algorithms
Prof. Dr. Nivio Ziviani
Department of Computer Science
Federal University of Minas Gerais, Brazil
See details at page 5

10:00 - 10:30
COFFEE BREAK

WED. 10:30 - 12:10
ENG: SALA FERNANDO PESSOA
(SE-4) Software Engineering
Sung Y. Shin, South Dakota University

Houston, we have a problem...: A Survey of Actual Problems in Computer Games Development
Fábio Petrillo, Universidade Federal do Rio Grande do Sul, Brazil
Marcelo Pimenta, Universidade Federal do Rio Grande do Sul, Brazil
Francisco Trindade, Universidade Federal do Rio Grande do Sul, Brazil
Carlos Dietrich, Universidade Federal do Rio Grande do Sul, Brazil

Automatic Software Fault Localization using Generic Program Invariants
Rui Abreu, Delft University of Technology, The Netherlands
Alberto González, Delft University of Technology and Universidad de Valladolid, The Netherlands and Spain
Peter Zoeteweij, Delft University of Technology, The Netherlands
Arjan J.C. van Gemund, Delft University of Technology, The Netherlands

Extending RUP to Develop Fault Tolerant Software
Carlos Eduardo de Barros Paes, Pontificia Universidade Catolica de Sao Paulo, Brazil
Celso Massaki Hirata, Instituto Tecnológico de Aeronáutica, Brazil
Edgar Toshiro Yano, Instituto Tecnológico de Aeronáutica, Brazil

ICER: A Tool for Finding Errors in a UML Model
Wuwei Shen, Western Michigan University, USA
Dae-Kyoo Kim, Oakland University, USA

A Detectability Analysis of Fault Classes for Boolean Specifications
Zhenyu Chen, Southeast University, China
Baowen Xu, Southeast University, China
Changhai Nie, Southeast University, China

WED. 10:30 - 12:10
IS: SALA IRACEMA

(MMV-1) Multimedia and Visualization
Virginie Sans, University of Cergy Pontoise/Etis Laboratory
<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>A New Approach for Interactive Semantic Image Retrieval Using the High Level Semantics</td>
<td>Mohammad Reza Kayvanpour, Azad University of Qazvin, Iran Shabnam Ashbaghi, Islamic Azad University of Qazvin, Iran</td>
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<td>k-Means Discriminant Maps for Data Visualization and Classification</td>
<td>Vo Dinh Minh Nhat, Kyung Hee University, Korea Young Sung Lee, Kyung Hee University, Korea</td>
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<td>Handle Local Optimum Traps in CBIR Systems</td>
<td>Dan Zhou Liu, University of Central Florida, USA Hao Cheng, University of Central Florida, USA</td>
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<td>Semi-Supervised Dimensionality Reduction in Image Feature Space</td>
<td>Hao Cheng, University of Central Florida, USA Khanh Vu, University of Central Florida, USA Danzhou Liu, University of Central Florida, USA</td>
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<td>IFOX : Interface for Ordered XQuery, An Algebraic Oriented Tool for Ordered XQuery Visualization</td>
<td>Virginie Sans, ETIS/CNRS Laboratory, France Dominique Laurent, ETIS/CNRS Laboratory, France</td>
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<td>Performability Evaluation of Mobile Client-Server Systems</td>
<td>Olivia Das, Ryerson University, Canada Arindam Das, York University, Canada</td>
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<tr>
<td>A Framework for Dependable QoS Adaptation in Probabilistic Environments</td>
<td>António Casinhal, Universidade de Lisboa, Portugal Paolo Lollini, Università degli Studi di Firenze, Italy Mónica Dixit, Universidade de Lisboa, Portugal Andrea Bondavalli, Università degli Studi di Firenze, Italy Paulo Verissimo, Universidade de Lisboa, Portugal</td>
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<td>Improving Denial of Service Resistance using Dynamic Local Adaptations</td>
<td>Gal Badishi, Technion, Israel Itid Keidar, Technion, Israel</td>
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<td>Serpentine: Adaptive Middleware for Complex Heterogeneous Distributed Systems</td>
<td>Miguel Matos, Universidade do Minho, Portugal Alfranio Correia Jr, Universidade do Minho, Portugal Jose Pereira, Universidade do Minho, Portugal Rui Oliveira, Universidade do Minho, Portugal</td>
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<tr>
<td>Providing Dependability for Web Services</td>
<td>Jeferson Luiz Rodrigues Sozzi, Federal University of Santa Catarina, Brazil Frank Siqueira, Federal University of Santa Catarina, Brazil</td>
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<tr>
<td>Towards an ASSL Specification Model for NASA Swarm-Based Exploration Missions</td>
<td>Emil Vassev, Concordia University, Canada Mike Hinchev, Loyola College in Maryland, USA Joey Paquet, Concordia University, Canada</td>
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<tr>
<td>Autonomic Management Policy Specification in Tune</td>
<td>Laurent Broto, Université Paul Sabatier, France Daniel Hagimont, Institut National Polytechnique de Toulouse, France Patricia Stolf, Institut Universitaire de Formation des Maîtres, France Noel Depalma, Institut National Polytechnique de Grenoble, France Suzy Temate, Université de Yaoundé I, Cameroun</td>
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<tr>
<td>A Reusable Object-Oriented Design to Support Self-Testable Autonomic Software</td>
<td>Tariq King, Florida International University, USA Alain Ramirez, Florida International University, USA Peter Clarke, Florida International University, USA Barbara Quinones-Morales, University of Puerto Rico Mayaguez, Puerto Rico</td>
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<tr>
<td>Implementing an Autonomic Architecture for Fault-Tolerance in a Wireless Sensor Network Testbed for At-Scale Experimentation</td>
<td>Mukundan Sridharan, The Ohio State University, USA Sandip Bapat, The Ohio State University, USA Rajiv Ramnath, The Ohio State University, USA Anish Arora, The Ohio State University, USA</td>
</tr>
<tr>
<td>Symbiosis in Logic-based Pointcuts over a History of Join Points</td>
<td>Kris Gybels, Vrije Universiteit Brussel, Belgium Charlotte Herzeel, Vrije Universiteit Brussel, Belgium Theo D'Hondt, Vrije Universiteit Brussel, Belgium</td>
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<tr>
<td>Énfasis: A Model for Local Variable Crosscutting</td>
<td>Ulises Juárez-Martínez, Center of Research and Advanced Studies, Mexico José Oscar Olmedo-Aguirre, Center of Research and Advanced Studies, Mexico</td>
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<td>Extending Omniscient Debugging to Support Aspect-Oriented Programming</td>
<td>Guillaume Pothier, University of Chile, Chile Éric Tanter, University of Chile, Chile</td>
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<td>On to Formal Semantics for Path Expression Pointcuts</td>
<td>Mohammed Al-Mansari, University of Duisburg-Essen, Germany Stefan Hauenberg, University of Duisburg-Essen, Germany Rainer Unland, University of Duisburg-Essen, Germany</td>
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<tr>
<td>Implementing Secure Document Circulation: A Prototype</td>
<td>Shane Bracher, Bond University, Australia Padmanabhan Krishnan, Bond University, Australia</td>
</tr>
</tbody>
</table>
Advanced Preference Query Processing for E-Commerce
Sven Döring, University of Augsburg, Germany
Timotheus Preisinger, University of Augsburg, Germany
Markus Endres, University of Augsburg, Germany

Increasing Trust through the Use of 3D e-commerce Environment
Nasser Nassiri, Higher Colleges of Technology, UAE

Towards a Complete SCM Ontology - The Case of Ontologising RosettaNet
Armin Haller, DERI, Ireland
Jedrzej Gontarczyk, DERI, Ireland
Paavo Kotinurmi, Helsinki University of Technology, Finland

12:10 - 13:30
Lunch Break

Wed. 13:30 - 15:10 ENG: SALA FERNANDO PESSOA
(SE-5) Software Engineering
Chang Oan Sung, Indiana University Southeast

Automatic Feedback, Control-Based, Stress and Load Testing
Mohamad Bayan, University of Texas at Dallas, USA
João Cangussu, University of Texas at Dallas, USA

PHALANX: A Graph-Theoretic Framework for Test Case Prioritization
Murali Krishna Ramanathan, Purdue University, USA
Mehmet Koyuturk, Case Western Reserve University, USA
Ananth Grama, Purdue University, USA
Suresh Jagannathan, Purdue University, USA

Using Adaptive Distinguishing Sequences in Checking Sequence Construction
Robert Hierons, Brunel University, UK
Guy-Vincent Jourdan, University of Ottawa, Canada
Hasan Ural, University of Ottawa, Canada
Husnu Yenigun, Sabanci University, Turkey

Using Adaptive Distinguishing Sequences in SPEM on a Test: The SODA Case Study
Elena Nardini, Università di Bologna, Italy
Ambra Molesini, Università di Bologna, Italy
Andrea Omicini, Università di Bologna, Italy
Enrico Denti, Università di Bologna, Italy

Test Generation and Minimization with “Basic” Statecharts
Fevzi Belli, University of Paderborn, Germany
Axel Hoffmann, University of Paderborn, Germany

Wed. 13:30 - 15:10 IS: SALA IRACEMA
(MMV-2) Multimedia and Visualization
Tobias Schreck, Interactive-Graphics Systems Group, Technical University of Darmstadt, Germany

Towards Automatic Feature Vector Optimization for Multimedia Applications
Tobias Schreck, Technische Universität Darmstadt, Germany
Dieter Fellner, Fraunhofer IGD and Technische Universität Darmstadt, Germany
Daniel Keim, University of Konstanz, Germany

Wed. 13:30 - 15:10 AIA: SALA TOM JOBIN
(SOPDS) Self Organization in Pervasive Distributed Systems
Marco Mamei, University of Modena and Reggio Emilia

Fast Self-Healing Gradients
Jacob Beal, MIT CSAIL, USA
Jonathan Bachrach, MIT CSAIL, USA
Dan Vickery, MIT CSAIL, USA
Mark Tobenkin, MIT CSAIL, USA

Synchronization of Strongly Pulse-Coupled Oscillators with Refractory Periods and Random Medium Access
Julius Degesys, BBN Technologies, USA
Prithwish Basu, BBN Technologies, USA
Jason Redi, BBN Technologies, USA

A Study of Terrain Coverage Models
Ronaldo Menezes, Florida Tech, USA
Harry Bullen, Florida Tech, USA

Supporting Self-organization for Hybrid Grid Resource Scheduling
Deger Cenk Erdil, Binghamton University (SUNY), USA
Michael J. Lewis, Binghamton University (SUNY), USA

Wed. 13:30 - 15:10 DS: SALA VASCO DA GAMA
(DADS-2) Dependable and Adaptive Distributed Systems
Karl M. Goeschka, Vienna University of Technology

Conflict-Aware Load-Balancing Techniques for Database Replication
Vaide Zuikeviciute, University of Lugano, Switzerland
Fernando Pedone, University of Lugano, Switzerland
SIPRe: A Partial Database Replication Protocol with SI Replicas
Jose Enrique Armendáriz-Iñigo, Universidad Pública de Navarra, Spain
Augusto Manch-Goya, Universidad Pública de Navarra, Spain
José Ramón González de Meulvill, Universidad Pública de Navarra, Spain
Francesc D. Muñoz-Escoá, Instituto Tecnológico de Informática, Spain

Total Order Broadcast on Pervasive Systems
Luiz Angelo Steffenel, Université de Reims Champagne-Ardenne, France
Manuele Kirsch-Pinheiro, Katoliek Universiteit Leuven, Belgium
Yolande Bebers, Katoliek Universiteit Leuven, Belgium

Model-Driven Development of Component-based Adaptive Distributed Applications
An Phung-Khac, GET/ENST Bretagne, France
Antoine Beugnard, GET/ENST Bretagne, France
Jean-Marie Gilliot, GET/ENST Bretagne, France
Maria-Teresa Segarra, GET/ENST Bretagne, France

Modelling Adaptive Services for Distributed Systems
Liliana Rosa, IST/INESC-ID, Portugal
Antónia Lopes, University of Lisbon, Portugal
Luís Rodrigues, IST/INESC-ID, Portugal

An Approach to Control a Population of Mobile Robots using Genetic Programming
Anderson Luiz Fernandes Perez, Federal University of Santa Catarina, Brazil
Guilherme Bittencourt, UFSC - Federal University of Santa Catarina, Brazil
Mauro Roisenberg, Federal University of Santa Catarina, Brazil

A Hybrid Real-time Component Model for Reconfigurable Embedded Systems
Ning Gui, University of Antwerp, Belgium
Vincenzo De Florio, University of Antwerp, Belgium
Hong Sun, University of Antwerp, Belgium
Chris Blondia, University of Antwerp, Belgium

Scara3D: 3-Dimensional HRI Integrated to a Distributed Control Architecture for Remote and Cooperative Actuation
José Martins Jr, University of São Paulo, Brazil
Luiz Camolesi Junior, Methodist University of Piracicaba, Brazil
Glauco A. P. Caurin, University of São Paulo, Brazil

Universal Concurrent Constraint Programming: Symbolic Semantics and Applications to Security
Carlos Olarte, INRIA & LIX École Polytechnique, France
Frank D. Valencia, LIX, École Polytechnique, France

Modeling Adversary Scheduling with QCSP+
Marco Benedetti, Université d’Orléans, France
Arnaud Lalouet, Université d’Orléans, France
Jérémie Vautard, Université d’Orléans, France

An Efficient Algorithm for a Sharp Approximation of Universally Quantified Inequalities
Alexandre Goldsztejn, CNRS, University of Nantes, France
Claude Michel, University of Nice, France
Michel Rueher, University of Nice, France

Splitting Heuristics for Disjunctive Numerical Constraints
Thomas Douillard, Université de Nantes, France
Christophe Jermann, Université de Nantes, France

An Evaluation of a Model-Based Testing Method for Information Systems
Pedro Santos-Neto, DIE/UFPI, Brazil
Rodolfo Ferreira Resende, DCC/UFMG, Brazil
Clarindo Pádua, DCC/UFMG, Brasil

Integrating Functional Metrics, Cocomo II and Earned Value Analysis for Software Projects Using PMBoK
Carlos A. L. Garcia, Instituto Tecnológico de Aeronáutica, Brazil
Celso Massaki Hirata, Instituto Tecnológico de Aeronáutica, Brazil

Optical Flow using Color Information: Preliminary Results
Kelson Aires, Universidade Federal do Rio Grande do Norte, Brazil
Andre Santana, Universidade Federal do Rio Grande do Norte, Brazil
Adelardo Medeiros, Universidade Federal do Rio Grande do Norte, Brazil

A new Approach to Control a Population of Mobile Robots using Genetic Programming
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15:10 - 15:40 LOBBY DO ÍNDIO
Coffe Break

An Approach for Supporting System-level Test Scenarios Generation from Textual Use Cases
Stéphane Somé, University of Ottawa, Canada
Xu Cheng, University of Ottawa, Canada

Towards Verification and Testing of Java Programs
Ana C. V. de Melo, University of São Paulo, Brazil
Paulo Nunes, University of São Paulo, Brazil
Kleber Xavier, University of São Paulo, Brazil

UML-based Design Test Generation
Waldemar Pires, Universidade Federal de Campina Grande, Brazil
João Brunet, Federal University of Campina Grande, Brazil
Franklin Ramalho, Federal University of Campina Grande, Brazil
Dalton Guerrero, Federal University of Campina Grande, Brazil

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Carlos A. L. Garcia, Instituto Tecnológico de Aeronáutica, Brazil
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15:40 - 17:20 ENG: SALA FERNANDO PESSOA
(SE-6) Software Engineering
Chang Oan Sung, Indiana University Southeast

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Carlos A. L. Garcia, Instituto Tecnológico de Aeronáutica, Brazil
Celso Massaki Hirata, Instituto Tecnológico de Aeronáutica, Brazil

15:40 - 17:20 LOBBY DO ÍNDIO
Coffe Break

15:40 - 17:20 ENG: SALA FERNANDO PESSOA
(Se-6) Software Engineering
Chang Oan Sung, Indiana University Southeast

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Celso Massaki Hirata, Instituto Tecnológico de Aeronáutica, Brazil

15:40 - 17:20 LOBBY DO ÍNDIO
Coffe Break
A Novel Protocol to Prevent Malicious Nodes from Misdirecting Forward Ants in AntNet Algorithm
Mohsen Saffarian, Royal Institute of Technology, Sweden
Matei Ciobanu Morogan, Royal Institute of Technology, Sweden

Web Service Access Management for Integration with Agent Systems
Benno Overeinder, Vrije Universiteit Amsterdam, Netherlands
Frances Brazier, Vrije Universiteit Amsterdam, Netherlands

Percolation Analyses in a Swarm Based Algorithm for Shortest-path Finding
Bruno Panerai Velloso, Federal University of Santa Catarina, Brazil
Mauro Roisenberg, Federal University of Santa Catarina, Brazil

A Generic Mobile Agent Framework for Ambient Intelligence
Yung-Chuan Lee, Southern Illinois University, USA
Elham S. Khorasani, Southern Illinois University, USA
Shahram Rahimi, Southern Illinois University, USA
Bidyut Gupta, Southern Illinois University, USA

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<th>Time</th>
<th>Room</th>
<th>Title</th>
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| Thu. 08:20 - 10:00 | ENG: Sala Fernando Pessoa | **(RE-1) Requirements Engineering**  
Rafael Dueire Lins, Federal University of Pernambuco |
|                 |              | **Toward Quality Requirements Analysis based on Domain Specific Quality Spectrum**  
Haruhiko Kaiya, Shinshu University, Japan  
Tomonori Sato, Shinshu University, Japan  
Akira Osada, Shinshu University, Japan  
Naoyuki Kitazawa, Shinshu University, Japan  
Kenji Kajiri, Shinshu University, Japan |
|                 |              | **Proposing Metrics of Difficulty of Domain Knowledge using Usecase Diagrams**  
Akira Osada, Shinshu University, Japan  
Daigo Ozawa, Shinshu University, Japan  
Naoyuki Kitazawa, Shinshu University, Japan  
Haruhiko Kaiya, Shinshu University, Japan  
Kenji Kajiri, Shinshu University, Japan |
| Thu. 08:20 - 10:00 | IS: Sala Iracema | **Requirements Engineering for COTS-Based Software Systems**  
Juan Pablo Carvallo, Etapatelecom, Ecuador  
Xavier Franch, Universitat Politècnica de Catalunya, Spain  
Carme Quer, Universitat Politècnica de Catalunya, Spain |
|                 |              | **Configuring Features with Stakeholder Goals**  
Yijun Yu, The Open University, United Kingdom  
Alexei Lapouchchian, University of Toronto, Canada  
Julio Cesar Sampo do Prado Leite, PUC-Rio, Brazil  
John Mylopoulos, University of Toronto, Canada |
|                 |              | **Using Annotations in the Naked Objects Framework to Explore Data Requirements**  
Marcos Broinizi, University of São Paulo, Brazil  
João Ferreira, University of São Paulo, Brazil  
Alfredo Goldman, University of São Paulo, Brazil |
| Thu. 08:20 - 10:00 | DS: Sala Vasco da Gama | **Data Stream Mining for Market-neutral Algorithmic Trading**  
Giovanni Montana, Imperial College London, UK  
Kostas Triantafyllopoulos, University of Sheffield, UK  
Theodoros Tsagaris, Imperial College London, UK |
|                 |              | **Cluster-based novel concept detection in data streams applied to intrusion detection in computer networks**  
Eduardo Spinoso, University of São Paulo, Brazil  
André Carvalho, University of Sao Paulo (USP), Brazil  
João Gama, University of Porto (UP), Portugal |
|                 |              | **Proposing Metrics of Difficulty of Domain Knowledge using Usecase Diagrams**  
Akira Osada, Shinshu University, Japan  
Daigo Ozawa, Shinshu University, Japan  
Naoyuki Kitazawa, Shinshu University, Japan  
Haruhiko Kaiya, Shinshu University, Japan  
Kenji Kajiri, Shinshu University, Japan |
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Carme Quer, Universitat Politècnica de Catalunya, Spain |
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John Mylopoulos, University of Toronto, Canada |
|                 |              | **Using Annotations in the Naked Objects Framework to Explore Data Requirements**  
Marcos Broinizi, University of São Paulo, Brazil  
João Ferreira, University of São Paulo, Brazil  
Alfredo Goldman, University of São Paulo, Brazil |
|                 |              | **Deciding What to Observe Next: Adaptive Variable Selection for Regression in Multivariate Data Streams**  
Christofooros Anagnostopoulos, Imperial College London, UK, UK  
Niall M. Adams, Imperial College London, UK  
David J. Hand, Imperial College London, UK |
|                 |              | **Using Association Rules for Energy Conservation in Wireless Sensor Networks**  
Suan Khai Chong, Monash University, Australia  
Shonali Krishnaswamy, Monash University, Australia  
Seng Wai Loke, Latribe University, Australia  
Mohamed Gaber, CSHRO, ICT Centre, Tasmania, Tasmania |
|                 |              | **Continuous k-Dominant Skyline Computation on Multidimensional Data Streams**  
Maria Kontaki, Aristotle University, Greece  
Apostolos Papadopoulos, Aristotle University, Greece  
Yannis Manolopoulos, Aristotle University, Greece |
Privacy Preservation Services: Challenges and Solutions  
Dijiang Huang, Arizona State University, USA  
Vinayak Kandiah, Arizona State University, USA  
Mayank Verma, Arizona State University, USA

Control of System Calls from Outside of Virtual Machines  
Koichi Onoue, The University of Tokyo, Japan  
Yoshihiro Oyama, The University of Electro-Communications, Japan  
Akinori Yonezawa, The University of Tokyo, Japan

An Inference System for Detecting Firewall Filtering Rules Anomalies  
Tarek Abbes, ISECS, Tunisia  
Adel Bouhoula, SUP’COM, Tunisia  
Michaël Rusinowitch, LORIA, France

Thu. 08:20 - 10:00 SWD: SALA AMÁLIA RODRIGUES  
(ACS-1) Advances in Computer Simulation  
Giuseppe Vizzari, University of Milano-Bicocca

A Statistical Approach for Prediction of Projects Based on Simulation  
Mariane Souza, Federal University of Minas Gerais, Brazil  
Humberto Oliveira, Federal University of Minas Gerais, Brazil  
Alexandre Vasconcelos, Federal University of Pernambuco, Brazil  
Sandro Oliveira, University of Amazonia, Brazil

Electricity Market Simulation: Multiagent System Approach  
Igor Walter, ANEEL - Brazilian Electricity Regulatory Agency, Brazil  
Fernando Gomide, Unicamp - FEEC - DCA, Brazil

Emerging Cooperation in a Public Goods Game with Competition  
Ana Bazzan, UFRGS, Brazil  
Roberto da Silva, UFRGS, Brazil  
Silvio Dahmen, UFRGS, Brazil  
Alexandre Baraviera, UFRGS, Brazil

Agent-based Simulation of Electronic MarketPlaces with Decision Support  
Isabel Praça, Instituto Superior de Engenharia / Instituto Politécnico do Porto, Portugal  
Maria João Vianonete, GECAD - ISEP/IPP, Portugal  
Zita Vale, GECAD - ISEP/IPP, Portugal  
Carlos Ramos, GECAD - ISEP/IPP, Portugal

Thu. 08:20 - 10:00 APP: SALA EÇA DE QUEIROZ  
(EMBS-1) Embedded Systems: Applications, Solutions, and Techniques  
Martino Sykora, Politecnico di Milano

VHDL vs. Bluespec System Verilog: A Case Study on a Java Embedded Architecture  
Flavio Gruau, Lund University, Sweden  
Mark Westnijie, University of Twente, The Netherlands

Formal Specification of DSP Gateway for Data Transmission Between Processor Cores of OMAP Platform  
Saulo Luiz, Federal University of Campina Grande, Brazil  
Genildo Vasconcelos, Federal University of Campina Grande, Brazil  
Leandro Dias da Silva, Paraiba State University, Brazil  
Angelo Perkusich, Federal University of Campina Grande, Brazil  
Antonio Lima, Federal University of Campina Grande, Brazil

Hardware Implementation for Network Intrusion Detection Rules with Regular Expression Support  
Dan Lo, UTSA, USA  
Yi-Gang Tai, UTSA, USA  
Kleanthis Psarris, UTSA, USA

LTS-BT: A Tool to Generate and Select Functional Test Cases for Embedded Systems  
Emanuela Cartaxo, Federal University of Campina Grande, Brazil  
Wilkerson Andrade, Federal University of Campina Grande, Brazil  
Francisco Oliveira Neto, Federal University of Campina Grande, Brazil  
Patrícia Machado, Federal University of Campina Grande, Brazil

A Hybrid Software-Based Self-Testing Methodology for Embedded Processor  
Tai-Hua Lu, National Cheng Kung University, Taiwan  
Chung-Ho Chen, National Cheng Kung University, Taiwan  
Kuen-Jong Lee, National Cheng Kung University, Taiwan

Thu. 10:00 - 10:30 LOBBY DO ÍNDIO  
Coffe Break

Thu. 10:30 - 12:10 ENG: SALA FERNANDO PESSOA  
(RE-2) Requirements Engineering  
Rafael Dueire Lins, Federal University of Pernambuco

Checking the Alignment of Value-based Business Models and IT Functionality  
Novica Zarvic, University of Twente, The Netherlands  
Roel Wieringa, University of Twente, The Netherlands  
Pascal van Eck, University of Twente, The Netherlands

Elaboration of Use Case Specifications: An Approach Based on Use Case Fragments  
Felipe Dias, Federal University of Rio de Janeiro, Brazil  
Eber Schmitz, Federal University of Rio de Janeiro, Brazil  
Maria Luiza Machado Campos, Federal University of Rio de Janeiro, Brazil  
Alexandre Correa, Federal University of Rio de Janeiro, Brazil  
Antonio Alencar, Federal University of Rio de Janeiro, Brazil

Capturing Business Transaction Requirements in Use Case Models  
Patrice Chalin, Concordia University, Canada  
Daniel Sinnig, Concordia University, Canada  
Kianoush Torkzadeh, Concordia University, Canada

Three Integration Approaches for Map and B-SCP Requirements Engineering Techniques  
Abdul Babar, University Technology Sydney, Australia  
Didar Zowghi, University of Sydney Technology & NICTA, Australia  
Karl Cox, NICTA, Australia  
Vladimir Toic, NICTA, Australia

Requirements Engineering Process Improvement: A Knowledge Transfer Experience  
Carina Alves, UFPE, Brazil  
George Valencia, UFPE, Brazil  
Tayanna Sotero, TCI BPO, Brazil  
Jean Mendes, TCI BPO, Brazil

Thu. 10:30 - 12:10 IS: SALA IRACEMA  
(DM-1) Data Mining  
Mohammad Zulkernine, Queen’s University
Frequent Pattern Mining for Kernel Trace Data
Christopher LaRosa, Emory University, USA
Li Xiong, Emory University, USA
Ken Mandelberg, Emory University, USA

A Hierarchical Model-based Approach to Co-Clustering High-Dimensional Data
Gianni Costa, ICAR-CNR, Italy
Giuseppe Manco, ICAR-CNR, Italy
Riccardo Ortale, ICAR-CNR, Italy

Semi-Supervised Visual Clustering for Spherical Coordinate Systems
Boris Chidlovskii, Xerox Research Centre Europe, France
Loïc Lecerf, Xerox Research Centre Europe, France

Using Unlabeled Data to Handle Domain-transfer Problem of Semantic Detection
Songbo Tan, Chinese Academy of Sciences, China
Yuefen Wang, Chinese Academy of Geological Sciences, China
Gaowei Wu, Institute of Computing Technology, China
Xueqi Cheng, Institute of Computing Technology, China

Elements for a Modular Dynamic Geometry System
Marc Freixas, Universitat Politècnica de Catalunya, Catalonia
Robert Joan Arinyo, Universitat Politècnica de Catalunya, Catalonia
Antoni Soto-Riera, Universitat Politècnica de Catalunya, Catalonia

An Algorithm for the Tracing Problem Using Interval Analysis
Britta Denner-Broser, FU-Berlin, Germany

Combining Symbolic and Numerical Solvers to Simplify Indecomposable Systems Solving
Arnaud Fahré, LSHT-Université Louis Pasteur, France
Pascal Schreck, LSHT-Université Louis Pasteur, Strasbourg, France

Isometry Group, Words and Proofs of Geometric Theorems
Dominique Michelucci, University of Dijon, France

A Continuous Facility Location Problem and its Application to a Clustering Problem
Luís Meira, Unicamp, Brazil
Flávio Miyazawa, Unicamp, Brazil

Offline Count-Limited Certificates
Luis F. G. Sarmenta, Massachusetts Institute of Technology, USA
Marten van Dijk, Massachusetts Institute of Technology, USA
Jonathan Rhodes, Massachusetts Institute of Technology, USA
Srinivas Devadas, Massachusetts Institute of Technology, USA

SQL-IDS: A Specification-based Approach for SQL-Injection Detection
Konstantinos Kemalis, University of the Aegean, Greece
Theodoros Tzouramanis, University of the Aegean, Greece

Verifiable Anonymous Vote Submission
André Zúquete, IEETA / Univ. Aveiro, Portugal
Filipe Almeida, IEETA / Univ. Aveiro, Portugal

A Validation Methodology for Agent-Based Simulations
Franziska Klügl, University of Würzburg, Germany

Large-Scale Simulation of V2V Environments
Hugo Conceição, DCC-FCUP & LIACC - University of Porto, Portugal
Luís Damas, DCC-FCUP & LIACC, University of Porto, Portugal
Michel Ferreira, DCC-FCUP & LIACC, University of Porto, Portugal
João Barros, Instituto de Telecomunicações & DCC/FCUP, University of Porto, Portugal

A Vehicular Waiting Time Heuristic for Dynamic Vehicle Routing Problem
Humberto Oliveira, Federal University of Minas Gerais, Brazil
Gustavo Rocha, Federal University of Minas Gerais, Brazil
Mariane Souza, Federal University of Minas Gerais, Brazil
Leonardo Ciscon, Federal University of Minas Gerais, Brazil
Vanessa Borges, Federal University of Minas Gerais, Brazil
Geraldo Mateus, Federal University of Minas Gerais, Brazil

A Framework for Execution and 3D Visualization of Situated Cellular Agent Based Crowd Simulations
Giuseppe Vizzari, University of Milano-Bicocca, Italy
Giorgio Pizzi, University of Milano-Bicocca, Italy
Flávio Soares Corrêa da Silva, Universidade de São Paulo, Brazil

Exploiting Program Cyclic Behavior to Reduce Memory Latency in Embedded Processors
Ehsan Atoofian, University of Victoria, Canada
Amirali Baniasadi, University of Victoria, Canada

The Minimization of Hardware Size in Reconfigurable Embedded Platforms
Nei-Ching Peng, Genesys Logic, Taiwan
Jian-Jia Chen, Swiss Federal Institute of Technology, Switzerland
Tei-Wei Kuo, National Taiwan University, Taiwan
Chi-Sheng Shih, National Taiwan University, Taiwan
Dynamic Configuration of Application-Specific Implicit Instructions for Embedded Pipelined Processors
Martino Sykora, Politecnico di Milano, Italy
Giovanni Agosta, Politecnico di Milano, Italy
Cristina Silvano, Politecnico di Milano, Italy

Power-efficient and Scalable Load/Store Queue Design via Address Compression
Yi Ying Tsai, National Cheng Kung University, Taiwan
Chia-Jung Hsu, National Cheng Kung University, Taiwan
Chung-Ho Chen, National Cheng Kung University, Taiwan

PFFS: A Scalable Flash Memory File System for the Hybrid Architecture of Phase-Change RAM and NAND Flash
Youngwoo Park, KAIST, Korea
Seung-Ho Lim, KAIST, Korea
Chul Lee, KAIST, Korea
Kyu Ho Park, KAIST, Korea
Jin Kyu Kim, Samsung Electronics Co., LTD., Korea

12:10 - 13:30
Lunch Break

Borderline Detection by Bayes Vector Quantizers
Claudia Diamantini, Universitá Politecnica delle Marche, Italy
Domenico Potena, Università Politecnica delle Marche, Italy

Privacy-Preserving Link Discovery
Xiaoyun He, Rutgers University, USA
Basit Shafiq, Rutgers University, USA
Jaideep Vaidya, Rutgers University, USA
Nabil Adam, Rutgers University, USA

Using Ambiguity Measure Feature Selection Algorithm for Support Vector Machine Classifier
Saket Mangal, Illinois Institute of Technology, USA
Nazli Goharian, Illinois Institute of Technology, USA

An Anomaly Intrusion Detection Method Using the CSI-KNN Algorithm
Liewi Kuang, Queens University, Canada
Mohammad Zulkernine, Queen’s University, Canada

Thu. 13:30 - 15:10
AIA: Sala Tom Jobim
(TRECK-1) Trust, Recommendations, Evidence and other Collaboration Know-how
Virgilio Almeida, Federal University of Minas Gerais

Thu. 13:30 - 15:10
ENG: Sala Fernando Pessoa
(DE-1) Document Engineering
Rafael Dueire Lins, Federal University of Pernambuco

A Language-Independent, Open-Vocabulary System Based on HMMs for Recognition of Ultra Low Resolution Words
Farshideh Einsele, Department of Informatics, Switzerland
Rolf Ingold, University of Fribourg, Switzerland
Jean Hennebert, HEI-SO, Switzerland

A Wrapper Generation System for PDF Documents
Bettina Fazzinga, University of Calabria, Italy
Sergio Flesca, University of Calabria, Italy
Andrea Tagarelli, University of Calabria, Italy
Salvatore Garruzzo, University of Reggio Calabria, Italy
Elio Masciarri, CNR, Italy

Thu. 13:30 - 15:10
IS: Sala Iracema
(NU-1) Document Structuring
Rafael Dueire Lins, Federal University of Pernambuco

A Generic XML Language for Characterising Objects to Support Digital Preservation
Christoph Becker, Vienna University of Technology, Vienna
Andreas Rauther, Vienna University of Technology, Austria
Volker Heydiger, University of Cologne, Germany
Jan Schasae, University of Cologne, Germany
Manfred Thaller, University of Cologne, Germany

Thu. 13:30 - 15:10
IS: Sala Iracema
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An Objective Way to Evaluate and Compare Binarization Algorithms
Ergina Kavallieratou, University of the Aegean, Greece

Thu. 13:30 - 15:10
DS: Sala Vasco da Gama
(CN-1) Computer Networks
Nelson Fonseca, State University of Campinas

Stacked Dependency Networks for Layout Document Structuring
Boris Chidlovskii, Xerox Research Centre Europe, France
Loic Lecerf, Xerox Research Centre Europe, France

Examining the Motivations of Defection in Large-Scale Open Systems
Rowan Martin-Hughes, The Australian National University, Australia
Jochen Renz, The Australian National University, Australia

Scheduling Grid Tasks under Uncertain Demands
Daniel Batista, State University of Campinas, Brazil
Andre Drummond, State University of Campinas, Brazil
Nelson Fonseca, State University of Campinas, Brazil

Autonomic Trust Reasoning Enables Misbehavior Detection in OLSR
Asmaa Adnane, SUPELEC, France
Rafael Timoteo de Sousa, University of Brasilia, Brazil
Christophe Bidan, SUPELEC, France
Ludovic Mé, SUPELEC, France

Surework: A Super-peer Reputation Framework for P2p Networks
Manuel Rodriguez-Perez, Universitat Politecnica de Catalunya, Spain
Oscar Esparza, Universitat Politècnica de Catalunya, Spain
Jose L. Muñoz, Universitat Politècnica de Catalunya, Spain
Sheikh Iqbal Ahamed, Marquette University, USA

CAT: A Context-Aware Trust Model for Open and Dynamic Systems
Mohammad Uddin, Queen’s University, Canada
Mohammad Zulkernine, Queen’s University, Canada
Sheikh Iqbal Ahamed, Marquette University, USA

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Andre Drummond, State University of Campinas, Brazil
Nelson Fonseca, State University of Campinas, Brazil
Performance Comparison of Flow-Aware Networking (FAN) Architectures under GridFTP Traffic  
César Cárdenas, ENST Paris, France  
Maurice Gagnaire, ENST Paris, France

Interacting Urns Processes  
Pierre Leone, University of Geneva, Switzerland  
Elad Michael Schiller, Chalmers University of Technology and Göteborg University, Sweden

On the Design and Performance Evaluation of Notification Support for P2P-Based Network Management  
Carlos Raniery Paula dos Santos, Federal University of Rio Grande do Sul, Brazil  
Clarissa Cassales Marquezan, Federal University of Rio Grande do Sul, Brazil  
Ewerton Monteiro Salvador, Federal University of Rio Grande do Sul, Brazil  
Luis Fernando Dalla Santa, Federal University of Rio Grande do Sul, Brazil  
Sérgio Luis Cechin, Federal University of Rio Grande do Sul, Brazil  
Lisandro Zambenedetti Granville, Federal University of Rio Grande do Sul, Brazil  
Maria Janice Bosquiroli Almeida, Federal University of Rio Grande do Sul, Brazil  
Liane Margarida Rochenbach Taruco, Federal University of Rio Grande do Sul, Brazil

On the Performance of Employing Presence Services in P2P-Based Network Management Systems  
Carlos Raniery Paula dos Santos, Federal University of Rio Grande do Sul, Brazil  
Sérgio Luis Cechin, Federal University of Rio Grande do Sul, Brazil  
Lisandro Zambenedetti Granville, Federal University of Rio Grande do Sul, Brazil  
Maria Janice Bosquiroli Almeida, Federal University of Rio Grande do Sul, Brazil  
Liane Margarida Rochenbach Taruco, Federal University of Rio Grande do Sul, Brazil

Certifying an Embedded Remote Method Invocation Protocol  
June Andronick, Gemalto, France  
Quang-Huy Nguyen, Gemalto, France

Flash Memory Management Based on Predicted Data Expiry-Time in Embedded Real-time Systems  
Peng Wei, University of Science and Technology of China, P.R.China  
Lihua Yue, University of Science and Technology of China, P.R.China  
Zhanzhan Liu, University of Science and Technology of China, P.R.China  
Xiaoyan Xiang, University of Science and Technology of China, P.R.China

Hierarchical Memory System Design for A Heterogeneous Multi-core Processor  
Jianjun Guo, National University of Defense Technology, China  
Mingche Lai, National University of Defense Technology, China  
Zhengyuan Pang, National University of Defense Technology, China  
Libo Huang, National University of Defense Technology, China  
Fangyuan Chen, National University of Defense Technology, China  
Kui Dai, National University of Defense Technology, China  
Zhiying Wang, National University of Defense Technology, China

A Reliable B-Tree Implementation over Flash Memory  
Xiaoyan Xiang, University of Science and Technology of China, P.R.China  
Lihua Yue, University of Science and Technology of China, P.R.China  
Zhanzhan Liu, University of Science and Technology of China, P.R.China  
Peng Wei, University of Science and Technology of China, P.R.China

Thu. 13:30 - 15:10 SWD: Sala Amália Rodrigues  
(SV-1) Software Verification  
Fausto Spoto, University of Verona

Type-Based Information Flow Analysis for Bytecode Languages with Variable Object Field Policies  
Francisco Bavera, Universidad Nacional de Río Cuarto, Argentina  
Eduardo Bonelli, UNLP, Argentina

Removing Useless Variables in Cost Analysis of Java Bytecode  
Elvira Albert, Complutense University of Madrid, Spain  
Puri Arenas, Complutense University of Madrid, Spain  
Samir Gennai, Technical University of Madrid, Spain  
Germán Puebla, Technical University of Madrid, Spain  
Damiano Zanardini, Technical University of Madrid, Spain

UML State Machine Diagram Driven Runtime Verification of Java Programs for Message Interaction Consistency  
Xuandong Li, Nanjing University, China  
Xiaokang Qiu, Nanjing University, China  
Linzheng Wang, Nanjing University, China  
Bin Lei, Nanjing University, China  
Eric Wong, University of Texas at Dallas, USA

Code-Carrying Theory  
Aytekin Vargun, Rensselaer Polytechnic Institute, USA  
David R. Musser, Rensselaer Polytechnic Institute, USA

Thu. 13:30 - 15:10 APP: Sala Eça de Queiroz  
(EMBS-3) Embedded Systems: Applications, Solutions, and Techniques  
Alessio Bechini, University of Pisa

Thu. 13:30 - 15:10 APP: Sala Eça de Queiroz  
(NLSP-1) Natural Language Processing and Speech Recognition  
Rada Mihalcea, University of North Texas

Learning to Identify Emotions in Text  
Carlo Strapparava, IRST, Italy  
Rada Mihalcea, University of North Texas, USA

Knowledge-Free Discovery of Domain-Specific Multiword Units  
Axel-Cyrille Ngonga Ngomo, University of Leipzig, Germany

15:10 - 15:40 Lobby do índio  
Coffe Break

Thu. 15:40 - 17:20 ENG: Sala Fernando Pessoa  
(DE-2) Document Engineering  
Rafael Dueire Lins, Federal University of Pernambuco
Crime Scene Classification
Ricardo Abu Hana, PUCPR, Brazil
Cintia Freitas, PUCPR, Brazil
Luiz Oliveira, PUCPR, Brazil
Flavio Bartolozzi, OPET, Brazil

Author Identification using Writer-Dependent and Writer-Independent Strategies
Daniel Pavlec, PUCPR, Brazil
Edson Justino, PUCPR, Brazil
Leonardo Vidal Batista, PPCG / DI / UFPB, Brazil
Luiz Oliveira, PUCPR, Brazil

BigBatch: A Document Processing Platform for Clusters and Grids
Giorgia Mattos, Universidade Federal de Pernambuco, Brazil
Andrei Formiga, Universidade Federal de Pernambuco, Brazil
Rafael Lins, Universidade Federal de Pernambuco, Brazil
Mário Martins, Universidade do Minho, Portugal

An Efficient Feature Ranking Measure for Text Categorization
Songbo Tan, Chinese Academy of Sciences, China
Yuefen Wang, Chinese Academy of Geological Sciences, China
Xueqi Cheng, Chinese Academy of Sciences, China

Thu. 15:40 - 17:20 IS: Sala Iracema (DM-3) Data Mining
Marcela Xavier Ribeiro, University of Sao Paulo at Sao Carlos

Mining Fault-tolerant Frequent Patterns Efficiently with Powerful Pruning
Jhih-Jie Zeng, National Dong Hwa University, Taiwan (R.O.C.)
Guangli Lee, National Dong Hwa University, Taiwan (R.O.C.)
Chung-Chi Lee, National Dong Hwa University, Taiwan (R.O.C.)

Discovering Relationships among Categories using Misclassification Information
Saket Mengle, Illinois Institute of Technology, USA
Nazli Goharian, Illinois Institute of Technology, USA
Alana Platt, Illinois Institute of Technology, USA

Adding Background Knowledge to Formal Concept Analysis via Attribute Dependency Formulas
Radim Belohlavek, Binghamton University-SUNY, USA
Vilem Vychodil, Binghamton University-SUNY, USA

k-RNN: k-Relational Nearest Neighbour Algorithm
Nuno A. Fonseca, Instituto de Biologia Molecular e Celular, Portugal
Vitor Costa, FCUP-LIACC, Portugal
Ricardo Rocha, FCUP-LIACC, Portugal
Rui Camacho, FEUP, Portugal

Thu. 15:40 - 17:20 AIA: Sala Tom Jobim (TRECK-2) Trust, Recommendations, Evidence and other Collaboration Know-how
Virgilio Almeida, Federal University of Minas Gerais

Tag-aware Recommender Systems by Fusion of Collaborative Filtering Algorithms
Karen H.L. Tso-Sutter, University of Hildesheim, Germany
Leandro Balby Marinho, University of Hildesheim, Germany
Lars Schmidt-Thieme, University of Hildesheim, Germany

The Effect of Correlation Coefficients on Communities of Recommenders
Neal Latthia, University College London, UK
Stephen Hailes, University College London, UK
Licia Capra, University College London, UK

Whom Should I Trust? The Impact of Key Figures on Cold Start Recommendations
Patricia Victor, UGhent, Belgium
Chris Cornelis, UGhent, Belgium
Ankur M. Teredesai, UW Tacoma, USA
Martine De Cock, UGhent, Belgium

Comparing Keywords and Taxonomies in the Representation of Users Profiles in a Content-Based Recommender System
Stanley Loh, Catholic University of Pelotas & Lutheran University of Brazil, Brazil
Fabiana Lorenzi, Lutheran University of Brazil, Brazil
Gabriel Simões, Federal University of Rio Grande do Sul, Brazil
Leandro Krug Wives, Federal University of Rio Grande do Sul, Brazil
José Palazzo M. de Oliveira, Federal University of Rio Grande do Sul, Brazil

Thu. 15:40 - 17:20 DS: Sala Vasco da Gama (CN-2) Computer Networks
Cesar Cardenas, ENST

A Bandwidth Management Scheme Support for Real-time Applications in Wireless Mesh Networks
Yan Wei, Peking University, China
Ren Maosheng, Peking University, China
Tong Zhao, Peking University, China
Li Xiaoming, Peking University, China

On the Performance of TCP, UDP and DCCP over 802.11g Networks
Leandro Sales, Federal University of Campina Grande, Brazil
Hyggio Almeida, Federal University of Campina Grande, Brazil
Antonio Perkusich, Federal University of Campina Grande, Brazil

Sensor Stream Reduction For Clustered Wireless Sensor Networks
André Aquino, Federal University of Minas Gerais, Brazil
Carlos Figueiredo, FUCAPI - Research and Technological Innovation Center, Brazil
Eduardo Nakamura, FUCAPI - Research and Technological Innovation Center, Brazil
Antônio A. F. Loureiro, Federal University of Minas Gerais, Brazil
Antônio Fernandes, Federal University of Minas Gerais, Brazil

Evaluating the Partial Deployment of an AS-level IP Traceback System
André Castelucio, Military Institute of Engineering, Brazil
Ronaldo Salles, Military Institute of Engineering (IME), Brazil
Artur Ziviani, National Laboratory for Scientific Computing (LNCC), Brazil

Attaining Soft Real-time Constraint and Energy-efficiency in Web Servers
Raphael Guerra, Technische Universität Kaiserslautern, Germany
Julius Leite, Federal University Fluminense, Brazil
Gerhard Fohler, Technische Universität Kaiserslautern, Germany

Thu. 15:40 - 17:20 SWD: Sala Amália Rodrigues (SV-2) Software Verification
German Puebla, Technical University of Madrid
Reachability Analysis of Generalized Polygonal Hybrid Systems
Gerardo Schneider, University of Oslo, Norway

Reachability Analysis using Multiway Decision Graphs in the HOL Theorem Prover
Sa’ed Abed, Concordia University, Canada
Otmane Ait Mohamed, Concordia University, Canada
Ghiath Al Sammane, Concordia University, Canada

Hossein Hojjat, University of Tehran, IPM, Iran
MohammadReza Mousavi, Eindhoven University of Technology, The Netherlands
Marjan Sirjani, University of Tehran, IPM, Iran

An Improved Approach for Set-Associative Instruction Cache Partial Analysis
Clement Ballabriga, Université de Toulouse - IRIT, France
Hugues Casse, Université de Toulouse - IRIT, France
Pascal Sainrat, Université de Toulouse - IRIT, France

A Novel Approach for Test Suite Reduction Based on Requirement Relation Contraction
Zhenyu Chen, Southeast University, China
Baowen Xu, Southeast University, China
Xiaofang Zhang, Southeast University, China
Changhai Nie, Southeast University, China

Thu. 15:40 - 17:20  APP: SALA EÇA DE QUEIROZ

(NLSP-2) Natural Language Processing and Speech Recognition
Rada Mihalcea, University of North Texas

Gcon: A Graph-Based Technique for Resolving Ambiguity in Query Translation Candidates
Dong Zhou, University of Nottingham, UK
Mark Truran, University of Teesside, UK
Tim Brailsford, University of Nottingham, UK
Helen Ashman, University of South Australia, Australia
James Goulding, University of Nottingham, UK

When a Mismatch Can Be Good: Large vocabulary speech recognition trained with idealized Tandem features
Arlo Faria, University of California, USA
Nelson Morgan, International Computer Science Institute, USA

Ontology-Based Utterance Interpretation for Intelligent Conversational Interfaces
Emerson Paraiso, PUCPR, Brazil

A Method for Semantics-based Conceptual Expansion of Ontology
Liping Zhou, University of Science and Technology Beijing, China
Dezhong Zhang, University of Science and Technology Beijing, China
Xin Chen, University of Alabama at Birmingham, USA
Chengcui Zhang, University of Alabama at Birmingham, USA

Thu. 17:20
Conference Ends
Using Process Algebra to Control the Execution of Business Processes
Kelly Rosa Braghetto, University of São Paulo, Brazil
João Ferreira, University of São Paulo, Brazil
Calton Pu, Georgia Institute of Technology, USA

Decentralized Coordination Strategies for the Vehicle Routing Problem
Matteo Vasiliani, University Rey Juan Carlos, Spain
Sascha Osowski, University Rey Juan Carlos, Spain

EPML: An Executable Process Modeling Language for Process-Aware Applications
Davide Rossi, University of Bologna, Italy
Elisa Turri, University of Bologna, Italy

(CSP) Constraint Satisfaction and Programming
Nested Temporal Networks with Alternatives: Recognition and Tractability
Roman Bartáč, Charles University, Czech Republic
Ondřej Čepek, Charles University, Czech Republic

(DTTA) Database Theory, Technology, and Applications
An Algorithm for Effective Deletion and a New Optimization Technique for Metric Access Methods
Renato Bueno, University of São Paulo at São Carlos, Brazil
Agma J. M. Traina, University of São Paulo at São Carlos, Brazil
Caetano Traina Jr., University of São Paulo at São Carlos, Brazil

Conversion of Generalization Hierarchies and Union Types from Extended Entity-Relationship Model to an XML Logical Model
Rebeca Schroeder, Federal University of Santa Catarina, Brazil
Ronaldos Santos Mello, Federal University of Santa Catarina, Brazil
Events must be Complete in Event Processing!
Raman Adaikkalavan, Indiana University South Bend, USA
Sharma Chakravarthy, Computer Science and Engineering, The University of Texas at Arlington, USA

(EBA) e-Business Applications
Building Secure e-Business Systems: Technology and Culture in the UAE
Fahim Akhter, Zayed University, United Arab Emirates
Lami Kaya, University of Sharjah, United Arab Emirates

(EC) Applications of Evolutionary Computation
A Genetic Algorithm for Sensor Deployment Based on Two-Dimensional Operators
Jae-Hyun Seo, Kwangwoon University, Korea
Yong-Hyuk Kim, Kwangwoon University, Korea
Hwang-Bin Ryu, Kwangwoon University, Korea
Soek-Joong Kang, Kwangwoon University, Korea

(MAS) Mobile Agents and Systems
Supporting the Development of Context-aware Agent-based Systems for Mobile Networks
Jose Viterbo, PUC-RJ, Brazil
Marcelo Malcher, PUC-RJ, Brazil
Markus Endler, PUC-RJ, Brazil

(SAC) 2008 Posters List
Tuesday, 9:00 - 12:00 Sala Vinicius de Moraes
Poster Session 1

(BIO) Bioinformatics
Discrete Wavelet Transform-based Multivariate Exploration of Tissue via Imaging Mass Spectrometry
Raf Van de Plas, Katholieke Universiteit Leuven, Belgium
Bart De Moor, K.U.Leuven, Belgium
Etienne Waelkens, K.U.Leuven, Belgium

Population Genetics of Human Copy Number Variations: Models and Simulation of their Evolution Along and Across the Genomes
Antonia Mitrofanova, NYU, USA
Bud Mishra, NYU, USA

(CF) Computer Forensics
Logical and Physical Data Collection of Windows CE Based Portable Devices
Antonio Savoldi, University of Brescia, Italy
Paolo Gubian, University of Brescia, Italy

(CISIA) Computational Logic and Computational Intelligence in Signal and Image Analysis
Revisiting Exact Combinational Circuit Synthesis
Paul Tarau, University of North Texas, USA
Brenda Luderman, INTEL Corp., USA

Texture Feature Extraction and Description Using Fuzzy Set of Main Dominant Directions of Variable Scales in Content-Based Medical Image Retrieval
Gang Zhang, Northeastern University, China
Liguo Deng, Northeastern University, China

Restoration of Vibro-acoustography Images
Talita Perciano, Universidade Federal de São Carlos, Brazil
Nelson D. A. Mascarrenhas, Universidade Federal de São Carlos, Brazil
Alejandro C. Frey, Universidade Federal de Alagoas, Brazil
Glauber T. Silva, Universidade Federal de Alagoas, Brazil

Empirical Evaluation of a New Structure for AdaBoost
Andre Barczak, Massey University, New Zealand
Martin J. Johnson, Massey University, New Zealand
Chris H. Messom, Massey University, New Zealand

(CM) Coordination Models, Languages and Applications
Preserving Coordination Properties when Transforming Concurrent System Components
Gudmund Grov, Heriot-Watt University, United Kingdom
Robert Pointon, Heriot-Watt University, United Kingdom
Greg Michaelson, Heriot-Watt University, United Kingdom
Andrew Ireland, Heriot-Watt University, United Kingdom

(ME) Middleware Engineering

COSMOS: A Middleware Platform for Sensor Networks and a u-Healthcare Service
Yung Bok Kim, Sejong University, Korea
Marie Kim, ETRI, Korea
Yong Joon Lee, ETRI, Korea

Exploiting Semantic Information on a Message Exchanging Middleware
Daniel Lobato, Faculdades COC, Brazil
Matheus Barbosa, IC/MC/USP, Brazil
Renato Freitas Balcão Neto, Innolution Sistemas de Informática Ltda, Brazil
Cesare Augusto Teixeira, DC/UFSCar, Brazil
Maria da Graça Pimentel, Universidade de São Paulo, Brazil

(SE) Software Engineering

A Case-based Reasoning Approach for Materializing Software Architectures onto Object-Oriented Designs
German Vazquez, Unicen, Argentina
Marcelo R. Campo, Unicen, Argentina
J. Andres Diaz Pace, Unicen, Argentina

A Method for Defining the Implementation Order of Software Projects Under Uncertainty
Eber Schmitz, Federal University of Rio de Janeiro, Brazil
Antonio Alencar, Federal University of Rio de Janeiro, Brazil
Carlos Azevedo, Federal University of Rio de Janeiro, Brazil

A Novel Modeling Language for Tool-based Business Process Engineering
Marco Mevius, FZI Research Center for Information Technologies, Germany

Organizational Modeling with a Semantic Wiki
David Aveiro, INESC-INOV, Portugal
João Mendes, INESC-INOV, Portugal
José Tribolet, INESC-INOV, Portugal

(RTS) Real-Time Systems

Strategies For QoS Improvement on The Time-Interval Scheduling
Fábio de la Rocha, Federal University of Santa Catarina, Brazil
Rômulo Silva de Oliveira, Federal University of Santa Catarina, Brazil

Slack Time Evaluation with RTSJ
Damien Masson, Université Paris-Est, France
Serge Midonnet, Université Paris-Est, France

On the Meaning of Modes in Uniprocessor Real-Time Systems
Paulo Martins, Champalimaud University of Honolulu, USA
Alan Burns, The University of York, UK

(SOPDS) Self Organization in Pervasive Distributed Systems

Self and Non-self Discrimination Agents
Carine Webber, University of Caxias do Sul, Brazil
João Luís Tavares Silva, University of Caxias do Sul, Brazil

Context Distribution for Supporting Composition of Applications in Ubiquitous Computing
Carlos Nogueira, Inria Futurs, France
Ellen Van Paeschen, Inria Futurs, France
Carlos Parra, Inria Futurs, France
Johan Fabry, University of Chile, Chile

Supporting Multimedia Capture in Mobile Computing Environments Through a Peer-to-Peer Platform
Renan Cattelan, Universidade de São Paulo, Brazil
Maria da Graça Pimentel, Universidade de São Paulo, Brazil

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Tuesday, 14:00 - 17:00 Sala Vinicius de Moraes Poster Session 2
(ACS) Advances in Computer Simulation

Coordination Schemes in Distributed Simulation of Relativistic Particle Transport
Ruipeng Li, Arkansas State University, USA
Hai Jiang, Arkansas State University, USA
Hung-Chi Su, Arkansas State University, USA
Bin Zhang, Arkansas State University, USA
Jeff Jenness, Arkansas State University, USA

RePart: A Reputation-based Simulation Tool for Partnership Formation
Priscilla Avegliano, Polytechnic School, University of São Paulo, Brazil
Jaime Sichman, Polytechnic School, University of São Paulo, Brazil

Generation of Continuous Random Networks by Simulated Annealing
André Luís Martinoto, Universidade de Caxias do Sul, Brazil
Felipe Jornada, Universidade Federal do Rio Grande do Sul, Brazil
Luciano Cassio, Universidade de Caxias do Sul, Brazil
Vaniza Gava, Universidade de Caxias do Sul, Brazil
Ricardo Vargas Dorneles, Universidade Caxias do Sul, Brazil
Claudio Antônio Perotoni, Universidade de Caxias do Sul, Brazil

(DADS) Dependable and Adaptive Distributed Systems

SSCM: Middleware for Structure-based Service Collaboration
Dianfu Ma, Beihang University, China
Min Liu, Beihang University, China
Yongwang Zhao, Beihang University, China
Chuyang Hu, Beihang University, China

(APSLA) Agent-Oriented Programming, Systems, Languages and Applications

A Multi-Agent System for the Support of Producer Coalition Formation in Electricity Markets
Isabel Praça, Instituto Superior de Engenharia / Instituto Politécnico do Porto, Portugal
André Andrade, GECAD - ISEP/IPP, Portugal
Hugo Morais, GECAD - ISEP/IPP, Portugal
Marilí Cardoso, GECAD - ISEP/IPP, Portugal
Carlos Ramos, GECAD - ISEP/IPP, Portugal
Zita Vale, GECAD - ISEP/IPP, Portugal

(ATOS) Adaptive Techniques in Operating Systems

PreeMe: Preemptive Real-time Task Management for Event-driven Sensor Operating Systems
Sangho Yi, Seoul National University, Korea
Hong Min, Seoul National University, Korea
Yookun Cho, Seoul National University, Korea
Injoo Jeong, East-West University, USA
Youngkwan Kim, West Illinois University, USA
Bongkyu Lee, Cheju National University, Korea
Jaeyoung Choi, Soongsil University, Korea

(ACS) Advances in Computer Simulation

Automated Segmentation and Volumetric Analysis of Brain Components on MR Imaging
Marcelo Pereira da Silva, Universidade Federal Fluminense, Brazil
Jean Ribeiro Damasceno, Universidade Federal Fluminense, Brazil
Flávio Luiz Seixas, Universidade Federal Fluminense, Brazil
Andrea Silveira de Souza, LABS-Rede D’Or, Brazil
Débora Christina Mchalaut Saade, Universidade Federal Fluminense, Brazil

Pathological Voice Discrimination Based on Entropy Measurements
Silvana Costa, Federal Center of Technological of Paraíba, Brazil
Suzete Correia, Federal Center of Technological Education of Paraíba, Brazil
Hanniere Falcão, Federal Center of Technological of Paraíba, Brazil
Nathalia Almeida, Federal Center of Technological of Paraíba, Brazil
Benedito Aguiar Neto, Federal University of Campina Grande, Brazil
Joseana Fehine, Federal University of Campina Grande, Brazil

(DADS) Dependable and Adaptive Distributed Systems

On the Control of Adaptation in Ubiquitous Computing
Luciano Cavalheiro da Silva, Federal University of Rio Grande do Sul, Brazil
Cristiano A. da Costa, Universidade Federal do Rio Grande do Sul, Brazil
Cláudio Geyer, Universidade Federal do Rio Grande do Sul, Brazil

(APSLA) Agent-Oriented Programming, Systems, Languages and Applications

A Pattern-driven Security Process for SOA Applications
Nelly A. Delessy, Florida Atlantic University, USA
Eduardo B. Fernandes, Florida Atlantic University, USA

(DE) Document Engineering

Information Extraction from Scanned Documents by Stochastic Page Layout Analysis
Atsuhiko Takaou, National Institute of Informatics, Japan
Kenro Aihara, National Institute of Informatics, Japan

A Strategy for Memory Traffic Management of Bitmap Fonts for Text Visualization in Mobile Devices
João Bosco Ferreira Filho, Universidade Federal do Ceará, Brazil
Helder S. Pinho, Samsung, Brazil
Riverson Rios, Universidade Federal do Ceará, Brazil
Rossana M. C. Andrade, Universidade Federal do Ceará, Brazil

(APS LA) Agent-Oriented Programming, Systems, Languages and Applications

Perspective Rectification of Camera-based Document Images Using Local Linear Structure
Yuanping Zhu, Chinese Academy of Sciences, China
Ruwei Dui, Institute of Automation, Chinese Academy of Sciences, China
Yinquing Zhu, Chinese Academy of Sciences, China
Baihua Xiao, Institute of Automation, Chinese Academy of Sciences, China
Chunheng Wang, Institute of Automation, Chinese Academy of Sciences, China

(ACS) Advances in Computer Simulation

Document Engineering

Imputation-Boosted Collaborative Filtering Using Machine Learning Classifiers
Xiaoyuan Su, Florida Atlantic University, USA
Taghi M. Khoshgoftaar, Florida Atlantic University, USA
Xingjuan Zhu, Florida Atlantic University, USA
Russell Greiner, University of Alberta, Canada

Anomaly Detection Algorithms in Logs of Process Aware Systems
Fábio Bezerra, UNICAMP, Brazil
Jacques Wainer, Universidade Estadual de Campinas, Brazil

A new Algorithm for Data Discretization and Feature Selection
Marcela X. Ribeiro, University of São Paulo at São Carlos, Brazil
Agna J. M. Traina, University of São Paulo at São Carlos, Brazil
Caetano Traina Jr., University of São Paulo at São Carlos, Brazil

(EIS) Enterprise Information Systems
Adaptive Data Anonymization against Information Fusion based Privacy Attacks on Enterprise Data
Srivatsava Ranjit Ganta, Penn State University, USA
Raj Acharya, Penn State University, USA

Information Systems Implementation: The Big Picture
Norbert Gronau, University of Potsdam, Germany
Michael Rohloff, mri Management Consulting, Germany

(EMBS) Embedded Systems: Applications, Solutions, and Techniques
Control Flow Checking and Recovering based on 8051 Architecture
Rui Gong, National University of Defense Technology, P. R. China
Wei Chen, National University of Defense Technology, P. R. China
Fang Liu, National University of Defense Technology, P. R. China
Kui Dai, National University of Defense Technology, China
Zhiying Wang, National University of Defense Technology, China

Using Traditional Loop Unrolling to Fit Application on a New Hybrid Reconfigurable Architecture
Monica Magalhães Pereira, Federal University of Rio Grande do Norte, Brazil
Silvio R. F. de Araújo, Federal University of Rio Grande do Norte, Brazil
Bruno C. de Oliveira, Federal University of Rio Grande do Norte, Brazil
Ivan Saraiva Silva, Federal University of Rio Grande do Norte, Brazil

Filtering Drowsy Instruction Cache to Achieve Better Efficiency
Roberto Giorgi, University of Siena, Italy
Paolo Bennati, University of Siena, Italy

(GCR) Geometrical Constraints and Reasoning
A Constraint Hierarchies Approach to Geometric Constraints on Sketches
Christophe Jermann, Université de Nantes, France
Hiroshi Hosobe, NII, Japan

Computing the Real Variety of an Ideal - A Real Algebraic and Symbolic-numeric Algorithm
Jean Lasserre, LAAS-CNRS Toulouse, France
Monique Laurent, CWI Amsterdam, The Netherlands
Philipp Rostalski, ETH, Switzerland

(IAR) Information Access and Retrieval
A Light-weight Feedback Method for Reconstructing a Document Vector Space on a Feature Extraction Model
Kosuke Takano, Kanagawa Institute of Technology, Japan
Xing Chen, Kanagawa Institute of Technology, Japan

On Filtering Irrelevant Results in Peer-to-Peer Search
Yuval Merhav, Illinois Institute of Technology, USA
Ophir Frieder, Georgetown University and IIT Information Retrieval Laboratory, USA

(MCA) Mobile Agents and Systems
Improving Network Management with Mobile Agents in Peer-to-Peer Networks
Rodrigo Santana, Federal University of Ceará, Brazil
Daniele Gomes, Federal University of Ceará, Brazil
Neuman Souza, Federal University of Ceará, Brazil
Russana M. C. Andrada, Federal University of Ceará, Brazil
Elías Duarte, Federal University of Paraná, Brazil
Lisandro Zambenedetti Granville, Federal University of Rio Grande do Sul, Brazil
Luci Pirmex, Federal University of Rio de Janeiro, Brazil

An Infrastructure for Developing Context Aware Applications in Pervasive Environments
Frederico Bublitz, Federal University of Campina Grande, Brazil
Hyggo Almeida, Federal University of Campina Grande, Brazil
Angelo Perkusich, Federal University of Campina Grande, Brazil
Emerson Loureiro, University College Dublin, Ireland
Evandro Barros, Federal University of Alagoas, Brazil
Leandro Dias, State University of Paraíba, Brazil

Context Addressing using Context-Aware Flooding
Koen Victor, KULEuven, Belgium
Julien Pauty, KULEuven, Belgium
Yolande Berbers, KULEuven, Belgium

CityWalker: A Mobile GPS for Walking Travelers
Tsz Ho Yu, The Chinese University of Hong Kong, China
Yiu-Sang Moon, The Chinese University of Hong Kong, Hong Kong
Kwai-Leung Chow, The Chinese University of Hong Kong, Hong Kong

A Farsi Part-of-Speech Tagger Based on Markov Model
Mahdi Mohseni, Iran University of Science and Technology, Iran
Hasan Motalebi, Iran University of Science and Technology, Iran
Behrouz Minaei-bidgoli, Iran University of Science and Technology, Iran
Mahmoud Shokrollahi-far, University College of Nabi Akram, Iran

(NLSP) Natural Language Processing and Speech Recognition
A Light-weight Feedback Method for Reconstructing a Document Vector Space on a Feature Extraction Model
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Ophir Frieder, Georgetown University and IIT Information Retrieval Laboratory, USA

(RE) Requirements Engineering
A Requirements Specification Case Study with ProjectIT-Studio/Requirements
David Ferreira, INESC-ID / Instituto Superior Técnico, Portugal
Alberto Silva, INESC-ID / Instituto Superior Técnico, Portugal

A Requirements Refinement Framework
WenQian Liu, University of Toronto, Canada
(SWA) The Semantic Web and Applications

C-SAW – Contextual Semantic Alignment of Ontologies – Using Negative Semantic Reinforcement
Brendan Tierney, Dublin Institute of Technology, Ireland
Mike Jackson, Birmingham City University, England

Context-aware Information Retrieval on a Ubiquitous Medical Learning Environment
Diogo Martins, Universidade Federal de São Carlos, Brazil
Luiz H. Z. Santana, Universidade Federal de São Carlos, Brasil
Mauro Biajiz, Universidade Federal de São Carlos, Brazil
Antonio Francisco do Prado, Universidade Federal de São Carlos, Brazil
Wanderley L. de Souza, Universidade Federal de São Carlos, Brazil

Towards the Generation of Explanations for Semantic Web Services in OWL-S
Carlos Gustavo Oliveira Fernandes, University of Fortaleza, Brazil
Vasco Furtado, University of Fortaleza, Brazil
Alyssa Glass, Stanford University, USA
Deborah L. McGuinness, Stanford University, USA

SAC 2009 Invitation

SAC 2009 will be held in Honolulu, Hawaii, USA, March 8 to 12, 2009. It is co-hosted by University of Hawaii at Manoa and Chaminade University of Honolulu. Please check the registration desk for handouts. You can also visit the website at http://www.acm.org/conferences/sac/sac2009/.

We hence invite you to submit track proposals, tutorial proposals, and technical papers, helping us in making SAC 2009 a very successful conference.