

APPLIED COMPUTING 2009

The 24th Annual ACM Symposium on Applied Computing

PROCEEDINGS OF THE 2009 ACM
SYMPOSIUM ON APPLIED COMPUTING

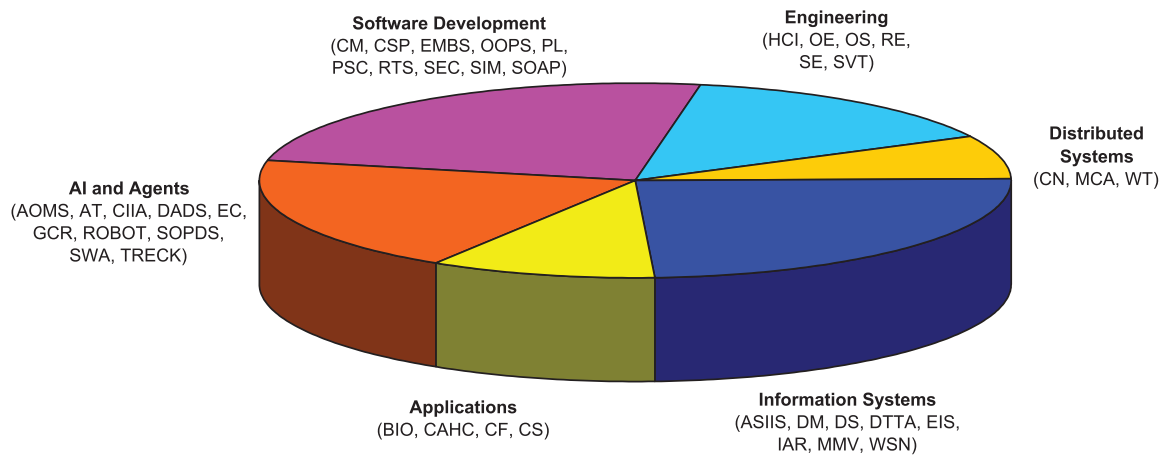
Honolulu, Hawaii, USA

March 8-12, 2009

Organizing Committee

Sung Y. Shin
Sascha Ossowski
Paulo Martins
Ronaldo Menezes
Mirko Viroli
Jiman Hong

Dongwan Shin
Mathew J. Palakal
Udo Fritzke
Martha Crosby
Hisham M. Haddad



Hosted by
University of Hawaii at Mānoa and Chaminade University of Honolulu

SAC 2009

Introduction

SAC 2009 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 2009 features 2 keynote speakers on Monday and Wednesday, from 8:20 to 10:00. The symposium consists of a Technical program offering 41 tracks on a wide number of different research topics, which run from Monday March 9 through Thursday March 12, 2009. Regular sessions start at 8:20 and end at 17:20 in up to 5 parallel sessions. Moreover, two poster tracks also run on Tuesday March 10, from 9:00 to 12:00 and from 14:00 to 17:00.

Organizing Committee

- Sascha Ossowski**, *Conference Co-Chair*
University Rey Juan Carlos, Spain
- Sung Y. Shin**, *Conference Co-Chair*
South Dakota State University, USA
- Paulo Martins**, *Conference Vice-Chair*
Chaminade University, USA
- Ronaldo Menezes**, *Program Chair*
Florida Institute of Technology, Melbourne, USA
- Mirko Viroli**, *Program Chair*
Alma Mater Studiorum - Università di Bologna, Italy
- Dongwan Shin**, *Publication Chair*
New Mexico Tech, USA
- Mathew J. Palakal**, *eConference Management Chair*
Indiana University Purdue University, USA
- Jiman Hong**, *Posters Chair*
Soongsil University, Korea
- Martha Crosby**, *Local Chair*
University of Hawai'i at Manoa, USA
- Udo Fritzke**, *Publicity Chair*
PUC-Minas, Brazil
- Barrett R. Bryant**, *Steering Committee Member*
University of Alabama at Birmingham, USA
- Hisham M. Haddad**, *Steering Committee Member, Treasurer, Webmaster*
Kennesaw State University, USA
- Roger L. Wainwright**, *Steering Committee Member*
University of Tulsa, USA

Track Chairs

- (AOMS) Agent-Oriented Software Engineering Methodologies and Systems**
Massimo Cossentino, ICAr-CNR Palermo, Italy
Ambra Molesini, Alma Mater Studiorum - Università di Bologna, Italy
Andrea Omicini, Alma Mater Studiorum - Università di Bologna, Italy
Valeria Seidita, Università degli Studi di Palermo, Italy

(ASIIS) Advances in Spatial and Image-based Information Systems

Richard Chbeir, Bourgogne University, France
Ki-Joune Li, Pusan National University, Korea
Kokou Yetongnon, Bourgogne University, France

(AT) Agreement Technologies

Jesús Cerquides, University of Barcelona, Spain
Peter McBurney, University of Liverpool, United Kingdom
Pablo Noriega, IIIA-CSIC, Spain
Juan A. Rodríguez-Aguilar, IIIA-CSIC, Spain

(BIO) Bioinformatics

Rajaraman Kanagasabai, Institute for Infocomm Research, Singapore
Mathew J. Palakal, Indiana University Purdue University Indianapolis, United States

(CAHC) Computer Application in Health Care

Rosa M. E. M. da Costa, Universidade do Estado do Rio de Janeiro, Brazil
Fátima L. S. Nunes, Escola de Artes, Ciências e Humanidades - Universidade de São Paulo, Brazil

(CF) Computer Forensics

Robert L. Hutchinson, Sandia National Laboratories, United States
Lorie M. Liebrock, New Mexico Institute of Mining and Technology, United States
Brajendra Panda, University of Arkansas, United States

(CIIA) Computational Intelligence and Image Analysis

Chih-Cheng Hung, Southern Polytechnic State University, United States
Agostinho Rosa, LASeeb-IST-UTL, Portugal

(CM) Coordination Models, Languages and Applications

Michael Ignaz Schumacher, University of Applied Sciences Western Switzerland, Switzerland
Alan Wood, University of York, United Kingdom

(CN) Computer Networks

Mário M. Freire, University of Beira Interior, Portugal
Edmundo Monteiro, University of Coimbra, Portugal
Manuela Pereira, University of Beira Interior, Portugal
Teresa Vazão, INESC ID/IST, Portugal

(CS) Computational Sciences

Yang Cao, Virginia Polytechnic Institute and State University, United States
Adrian Sandu, Virginia Polytechnic Institute and State University, United States

(CSP) Constraint Solving and Programming

Stefano Bistarelli, University of Perugia, University of Chieti-Pescara and IIT-CNR, Pisa, Italy
Eric Monfroy, Eric Monfroy, UTFSM, Valparaiso, Chile and LINA, University of Nantes, France,
Barry O'Sullivan, University College Cork, Ireland

(DADS) Dependable and Adaptive Distributed Systems

Karl M. Goeschka, Vienna University of Technology, Austria
Svein O. Hallsteinsen, SINTEF ICT, Norway
Rui Oliveira, Universidade do Minho, Portugal
Alexander Romanovsky, University of Newcastle, United Kingdom

(DM) Data Mining

Hasan Jamil, Wayne State University, United States
Chandan Reddy, Wayne State University, United States
Osmar Zaiane, University of Alberta, Canada

(DS) Data Streams

Jesús Aguilar, University Pablo Olavide, Spain
André Carvalho, University S. Paulo, Brasil
João Gama, University of Porto, Portugal
Pedro Pereira Rodrigues, Porto University of Porto, Portugal

(DTTA) Data Theory, Technology, and Applications

Ramzi A. Haraty, Lebanese American University, Lebanon
Apostolos N. Papadopoulos, Aristotle University, Greece
Junping Sun, Nova Southeastern University, United States

(EC) Applications of Evolutionary Computation

Bryant A. Julstrom, St. Cloud State University, United States

(EIS) Enterprise Information Systems

Rogério Atem de Carvalho, CEFET Campos, Brazil
Maria-Eugenia Iacob, University of Twente, The Netherlands
Asterio Kiyoshi Tanaka, UniRio, Brazil

(EMBS) Embedded Systems

Alessio Bechini, University of Pisa, Italy
Prete Cosimo Antonio, University of Pisa, Italy

(GCR) Geometric Constraints and Reasoning

Xiao-Shan Gao, Chinese Academy of Sciences, China
Robert Joan-Arinyo, Universitat Politècnica de Catalunya, Catalonia
Dominique Michelucci, CNRS, France

(HCI) Human-Computer Interaction

Brent Auernheimer, California State University, Fresno, United States
Shih-Hsi Liu, California State University, Fresno, United States

(IAR) Information Access and Retrieval

Gloria Bordogna, CNR - National Research Council, Italy
Gabriella Pasi, University of Milano Bicocca, Italy

(MCA) Mobile Computing and Applications

Alvin Chan, The Hong Kong Polytechnic University, Hong Kong
Hong Va Leong, The Hong Kong Polytechnic University, Hong Kong

(MMV) Multimedia and Visualization

Maria G. Pimentel, SCC/ICMC/USP, Brazil
Ethan V. Munson, University of Wisconsin-Milwaukee, United States

(OE) Organizational Engineering

Artur Caetano, Technical University of Lisbon, Portugal
José Tribolet, Technical University of Lisbon, Portugal
Robert Winter, University of St. Gallen, Switzerland

(OOPS) Object Oriented Programming Languages and Systems

Davide Ancona, University of Genova, Italy
Alex Buckley, Sun Microsystems, United States

(OS) Operating Systems

Jiman Hong, Soongsil University, Korea
Tei-Wei Kuo, National Taiwan University, Taiwan

(PL) Programming Languages

Barrett Bryant, University of Alabama at Birmingham, United States
Marjan Mernik, University of Maribor, Slovenia

(PSC) Programming for Separation of Concerns

Yvonne Coady, University of Victoria, Canada
Corrado Santoro, Università di Catania, Italy
Emiliano Tramontana, Università di Catania, Italy

(RE) Requirement Engineering

Maria Lencastre, Universidade de Pernambuco, Brazil

(ROBOT) Intelligent Robotic Systems

Eduardo Marques, University of Sao Paulo, Brazil
Fernando Osorio, University of Sao Paulo, Brazil
Denis Wolf, University of Sao Paulo, Brazil

(RTS) Real-Time Systems

Paulo Martins, Chaminade University, United States
Binoy Ravindran, Virginia Tech, United States

(SE) Software Engineering

Sung Y. Shin, South Dakota State University, United States
Chang Oan Sung, Indiana University Southeast, United States
W. Eric Wong, University of Texas at Dallas, United States

(SEC) Computer Security

Giampaolo Bella, Università di Catania, Italy
Luca Compagna, SAP Research, Sophia Antipolis, France

(SIM) Advances in Computer Simulation

Fabien Michel, Université Montpellier II, CNRS, France
Giuseppe Vizzari, University of Milano-Bicocca, Italy

(SOAP) Service Oriented Architectures and Programming

Claudio Guidi, Alma Mater Studiorum – Università di Bologna, Italy
Ivan Lanese, Alma Mater Studiorum – Università di Bologna, Italy
Manuel Mazzara, Newcastle University, United Kingdom

(SOPDS) Self-Organization in Pervasive Distributed Systems

Marco Mamei, university of modena and reggio emilia, Italy
Justin Werfel, NECSI/Harvard Med School, United States

(SVT) Software Verification and Testing

Tamara Rezk, INRIA, France

(SWA) The Semantic Web and Applications

Hyoil Han, Drexel University, United States

(TRECK) Trust, Reputation, Evidence and other Collaboration Know-how

Jean-Marc Seigneur, University of Geneva, Switzerland

(WSN) Wireless Sensor Networks

Richard Anthony, Greenwich University, United Kingdom
Julie McCann, Imperial College London, United Kingdom

(WT) Web Technologies

Davide Rossi, Alma Mater Studiorum – Università di Bologna, Italy
Fabio Vitali, Alma Mater Studiorum – Università di Bologna, Italy

Local Support

Local support for SAC 2009 is provided by Chaminade University of Honolulu (CUH) and University of Hawaii at Manoa (UH). The SAC organizing committee acknowledges and thanks the local supporters for their generous contributions to SAC 2009. Their support has been essential to the success of the Symposium, and it 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 application 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 supports the applied computing community by providing funds for students and researchers from economically developing countries to present their papers at SAC. This year we awarded \$10,000 to 14 researchers representing 5 different developing countries, and over \$30,000 to 51 students, representing 13 different countries. SIGAPP is also pleased to sponsor the opening reception for SAC 2009. SIGAPP membership fees are: \$30.00 for ACM Non-members, \$15.00 for ACM Members, and \$8.00 for Student Members. For further information contact Barrett Bryant at bryant@cis.uab.edu. Also, check out the SIGAPP website at <http://www.acm.org/sigapp>.

Message from the Symposium Chairs

Sung Y. Shin

South Dakota State University, USA

Sascha Ossowski

University Rey Juan Carlos, Spain

On behalf of the Organizing Committee, we welcome you to the 24th Annual ACM Symposium on Applied Computing (SAC 2009) hosted by Chaminade University in Hawaii. This international forum has been dedicated to computer scientists, engineers and practitioners for the purpose of presenting their findings and research results in various areas of computer applications. The organizing committee is grateful for your participation in this exciting international event. We hope that this conference proves interesting and beneficial.

The Symposium is sponsored by the ACM Special Interest Group on Applied Computing (SIGAPP), whose mission is to further the interests of computing professionals engaged in the design and development of new computing applications, interdisciplinary applications areas, and applied research. This conference is dedicated to the study of applied research of real-world problems. This event provides an avenue to discuss and exchange new ideas in the wide spectrum of application areas. We all recognize the importance of keeping up with the latest developments in our current areas of expedites.

SAC 2009 offers Technical Tracks and Posters. The success of the conference can be attributed to the substantial contribution of talented Track Chairs and Co-Chairs. Each track maintains a program committee and a set of highly qualified reviewers. We wish to thank the Track Chairs, Co-Chairs, Committee Members and participating reviewers for their hard work and effort to make the SAC 2009 conference a high quality conference. We also thank our invited keynote speakers, Dr. Vahid Tarokh, Harvard University and Dr. Rolf-Peter Kudritzki, University of Hawaii's Institute for Astronomy for sharing their knowledge with SAC attendees. Most of all, special thanks to the authors and presenters for sharing their experience with the rest of us and to all attendees for joining us in Honolulu, Hawaii this year.

The local organizing committee has always been a central contributor to the success of the SAC 2009 conference. Our gratitude goes to the Conference Vice-Chair Dr. Paulo Martins of Chaminade University and Local Chair Dr. Martha Crosby of University of Hawaii at Mānoa. We also extend our thanks to the Publication Chair, Dr. Dongwan Shin, New Mexico Tech for his tremendous effort in putting together the conference proceedings, Posters Chair Dr. Jiman Hong of Soongsil University for his hard work to make a successful Poster Program, Publicity Chair, Dr. Udo Fritzsche, PUC-Minas for his hard work, and eConference Management Chair, Dr. Mathew J. Palakal of Indiana University Purdue University for successfully maintaining the eCMS system. A special thanks goes to our Program Chairs Dr. Mirko Viroli, Università di Bologna and Dr. Ronaldo Menezes, Florida Institute of Technology for coordinating and bringing together an excellent Technical Program.

Again, we welcome you to SAC 2009 and the beautiful city of Honolulu, Hawaii. We hope you enjoy the SAC 2009 conference and your stay in Hawaii. Next year, we invite you to participate in SAC 2010 to be held in Crans-Montana/Sierre, Switzerland. The conference will be hosted by the University of Applied Sciences Western Switzerland (HES-SO) Sierre, and Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland.

Message from the Program Chairs

Ronaldo Menezes

Florida Institute of Technology, USA

Mirko Viroli

Alma Mater Studiorum - Università di Bologna, Italy

It is a pleasure to introduce the Final Program of the 24th Symposium on Applied Computing (SAC 2009). Over the past 23 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. SAC 2009 consolidates this tradition, and offers a Technical Program with a wide range of tracks covering major areas of computer applications. Published papers have been reviewed by highly qualified referees with strong expertise and special interest in their respective research areas. As part of the Technical Program, this is the sixth year that SAC incorporates poster papers, carefully selected by Poster Chair Jiman Hong from Soongsil University in Korea.

SAC 2009 would not be possible without contributions from members of the scientific community. It is easy to imagine that many people have dedicated tremendous time and effort over the period of the last 12 months to bring you an excellent program. The success of SAC 2009 relies on the effort and hard work of many volunteers. On behalf of the SAC 2009 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 Paulo Pedro from the Chaminade University.

SAC's open Call for Track Proposals resulted in the submission of 60 track proposals. These proposals were carefully evaluated by the conference Program Committee, based on their scientific quality, on available data from previous editions, and on their appropriateness for SAC. In response to the call for papers produced by each track, 1084 papers were submitted from more than 58 countries, and 41 tracks have been eventually established. After a reviewing process where each paper was evaluated by a minimum of three reviewers, 315 papers were accepted as full papers for inclusion in the Conference Proceedings and presentation during the Symposium. This gives SAC 2009 an acceptance rate of 29.1% across all tracks. These numbers make SAC 2009 the most competitive SAC to date. Additionally, 96 posters have been selected to form the Poster Paper Program, and to appear as short papers in the proceedings. Due to the success last year, this year we maintained the idea of organizing the tracks into themes related to 6 main

areas in computer science. The themes were used in the preparation of the Proceedings and the schedule of presentations, aimed at forming streams of related track sessions, and at minimizing overlap of scope in presentations of 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 Hawaii and take pleasure from the many entertainments and activities that the city of Honolulu 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 Europe, more specifically to Switzerland. Thank you for being part of SAC 2009, and we hope to see you in Switzerland for SAC 2010.

SAC 2009 Themes

This year SAC tracks are divided into 6 *themes*: each theme will be associated to one room (APP and DS stay in the same room), hence related tracks will take place sequentially in the same room, so as to promote sharing and cross-fertilization of ideas through the whole audience of a theme. Check the schedule at page 7 for details. These are the six themes of SAC 2009:

(ENG) Engineering

Located in S.Pacific Ballroom #1
Tracks: HCI, OE, OS, RE, SE, SVT

(IS) Information Systems

Located in S.Pacific Ballroom #2
Tracks: ASIIS, DM, DS, DTTA, EIS, IAR, MMV, WSN

(AIA) AI and Agents

Located in S.Pacific Ballroom #3
Tracks: AOMS, AT, CIA, DADS, EC, GCR, ROBOT, SOPDS, SWA, TRECK

(SWD) Software Development

Located in S.Pacific Ballroom #4
Tracks: CM, CSP, EMBS, OOPS, PSC, PL, RTS, SEC, SIM, SOAP

(DS) Distributed Systems

Co-located in Hibiscus Suite
Tracks: CN, MCA, WT

(APP) Applications

Co-located in Hibiscus Suite
Tracks: BIO, CAHC, CF, CS

Other Activities

SIGAPP Annual Business Meeting: Monday March 9, from 18:00 to 19:00 in Coral Ballroom #1. Open to everyone.

SAC Reception (Hosted by SIGAPP): Monday March 9, from 19:00 to 21:00. Coral Ballroom #4. Open for all registered attendees.

Poster Sessions: Tuesday March 10, from 9:00 to 12:00 and from 14:00 to 17:00 in Coral Lounge. Open to everyone.

SAC General Luncheon: Tuesday March 10, from 12:10 to 13:30. Coral Ballroom #4. Open for all registered attendees.

Future SAC Organization Meeting: Tuesday March 10, from 18:00 to 19:00 in Coral Ballroom #2. Open for SAC Organizing Committee.

Track Chairs Business Meeting: Wednesday March 11, from 18:00 to 19:00. S.Pacific Ballroom #1. Open for SAC Organizing Committee and Track Chairs.

SAC Banquet: Wednesday March 11. Departure at 19:15 from Hilton Hawaiian Village Hotel towards Polynesian Cultural Center. Open for Banquet Ticket holders. See your tickets for full details.

SAC Best Papers Award: Wednesday March 11. Polynesian Cultural Center. During the SAC Banquet SAC Program Chairs will award one best paper for each of the six themes of this conference.

Track-Chairs Luncheon: Thursday March 12, from 12:10 to 13:30. Sea Pearl Suite 1-2. Open for SAC Organizing Committee and Track Chairs.

SAC 2010

SAC 2010 will be held in Crans-Montana/Sierre, Switzerland, from March 21st to March 26th, 2010. It is hosted by the University of Applied Sciences Western Switzerland (HES-SO) Sierre, and Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. Please check the registration desk for handouts. You can also visit the website at <http://www.acm.org/conferences/sac/sac2010/>.

Monday Keynote Address

Computational Aspects and Algorithms for Dynamic Spectrum Allocation

Dr. Vahid Tarokh
Harvard University, USA

MONDAY MARCH 9, 8:20 – 10:00AM
ROOM: CORAL BALLROOM 1-2

Abstract

In many emerging wireless networks (such as ad hoc networks, cognitive radios, etc.), no central frequency allocation authority is available. This makes distributed frequency allocation an important but mostly uncharted territory in wireless networking. However, it is well-known that optimal dynamic frequency assignment is a computationally hard problem.

We will first discuss emerging applications for dynamic frequency allocation and then discuss the underlying computational issues. We then discuss some of the existing proposed solutions to dynamic frequency allocation in different contexts, such as methods based on graph coloring and iterative water filling. These approaches either excessively simplify the interference models, or are not fully decentralized, or require too much information exchange between autonomous entities, or suffer from all these shortcomings. Additionally, they are all too complex to implement.

Subsequently, for a specific class of networks, we disclose a simple, fully distributed, greedy asynchronous interference avoidance algorithm (GADIA) that requires neither any information exchange between autonomous devices, nor even any knowledge of the existence of other autonomous entities. The GADIA algorithm achieves performance close to that of a centralized optimal algorithm for this class of networks, and achieves about 90% of the Shannon capacities corresponding to the optimum/near-optimum centralized frequency band assignments. Additionally, it can be used in conjunction with any realistic wireless radio channel model such as those commonly employed in wireless standards.

We prove the convergence of the GADIA algorithm to a sub-optimal solution, and develop performance bounds showing that this sub-optimal solution is near-optimal under various practical node activity models. In particular, using stochastic analysis, we introduce a framework to analyze the performance of the GADIA in the presence of time-varying activity rates of clusters. This framework opens the possibilities of both open loop and closed loop stochastic control to improve the performance of distributed frequency allocation. Extension of Gadia to more general networks and addressing the underlying computational problems remain an open problem.

This is a joint work with Behtash Babadi.

Short Bio: Dr. Vahid Tarokh worked at AT&T Labs-Research and AT&T wireless services until August 2000, where he was the head of the Department of Wireless Communications and Signal Processing. In September 2000, he joined Department of Electrical Engineering and Computer Sciences (EECS) at MIT as an associate professor. In June

2002, he joined Harvard University as a Gordon McKay Professor of Electrical Engineering. Since July 2005, he is a Hammond Vinton Hayes Senior Fellow of Electrical Engineering at Harvard University, and a Perkins professor. His research is mainly focused in the areas of Signal processing, Communications (wireline and wireless) and Networking. He has received a number of awards and holds 2 honorary degrees.

Wednesday Keynote Address

Astronomy in Hawaii: Exploring Our Universe with the Largest Telescopes in the World

Dr. Rolf-Peter Kudritzki
Director of the University of Hawaii's Institute for
Astronomy, USA

WEDNESDAY MARCH 11, 8:20 – 10:00AM
ROOM: CORAL BALLROOM 1-2

Abstract

Astronomy, like no other science, has revolutionized our thinking about the world and our human existence. With every new generation of technology, more and more powerful telescopes have contributed to extending our knowledge of the universe. Today, the largest and most powerful telescopes in the world are located in Hawaii on the summit of Mauna Kea (14,000 feet). The many spectacular and fundamental discoveries made with these new facilities are the subject of this presentation. We will discuss the detection of new worlds such as planets orbiting around other stars, proto-planetary disks forming new planetary systems, the black hole in the center of our galaxy, dark matter and dark energy and the accelerated expansion of the universe, and the detection of galaxies 13 billion light years away from us. We will also discuss the scientific potential and scope of the coming next generation telescopes, which will take us even further in this breathtaking endeavor to understand the cosmos we live in.

Short Bio: Dr. Rolf-Peter Kudritzki has been the Director of the University of Hawaii's Institute for Astronomy since October of 2000. Dr. Kudritzki was formerly a Professor of Astronomy and Director of the Institut für Astronomie und Astrophysik at the University of Munich. Since the summer of 1999, he has been Dean of the Faculty of Physics at the University of Munich. He has also been a director of the Max-Planck-Institut für Astrophysik. Dr. Kudritzki's research activities and international collaborations have led to his participation and membership in a wide range of international committees. For many years he has been a member and chair of the advisory Visiting Committee for the Hubble Space Telescope Science Institute, located at the Johns Hopkins University. In addition, he was chair of the European Southern Observatory Advisory Committee, and is a member of the Board of Directors of the Association of Universities for Research and Astronomy (AURA). AURA manages U.S. national observatories located in Arizona, New Mexico and Chile; the two international Gemini observatories,

which are located in Chile and Hawaii; and the Hubble Space Telescope Science Institute. He is also the chair of the National Science Working group for the Next Generation Giant Segmented Mirror Telescope. In addition to his administrative responsibilities, Dr. Kudritzki has continued to pursue a career as an active researcher. His recent research has been in the area of the investigation of the physics of stars and galaxies, and in particular their evolution. For the past ten years, he has been involved in the development of new telescopes and telescope instrumentation. He has published more than 200 publications in refereed journals and has been invited frequently to give presentations at international science conferences. He has supervised more than 30 Ph.D. students, many of whom now are professors themselves. From January 2003 to December 2004, Dr. Kudritzki has held the title of Interim Vice Chancellor for Research and Graduate Education at the University of Hawaii. Dr. Kudritzki holds a diploma in Physics and a Ph.D. in Astronomy from the Technische Universität, Berlin.

Tracks Schedule

Monday March 9, 2009

MON. 8:20 - 10:00 CORAL BALLROOM 1-2
Keynote Address

Computational Aspects and Algorithms for Dynamic Spectrum Allocation

Dr. Vahid Tarokh
Harvard University, USA

See details at page 5

10:00 - 10:30 CORAL LOUNGE
Coffee Break

MON. 10:30 - 12:10 ENG: S.PACIFIC BALLROOM #1

(SVT-1) Software Verification and Testing

Session chair: Tamara Rezk, INRIA, France

An Optimized Change-Driven Regression Testing Selection Strategy for Binary JAVA Applications

Sheng Huang, IBM China Research Lab, China
Yang Chen, Tsinghua University, China
Jun Zhu, IBM China Research Lab, China
Zhong Jie Li, IBM China Research Lab, China
Hua Fang Tan, IBM China Research Lab, China

An Approach for Component Testing and Its Empirical Validation

Fernando R.C. Silva, Federal University of Pernambuco, Brazil
Eduardo S. Almeida, Recife Center for Advanced Studies & Systems, Brazil
Silvio R.L. Meira, Federal University of Pernambuco, Brazil

The Synergy of Precise and Fast Abstractions for Program Verification

Natasha Sharygina, University of Lugano, Switzerland
Stefano Tonetta, Fondazione Bruno Kessler, Italy
Aliaksei Tsitovich, University of Lugano, Switzerland

Enforcement Monitoring wrt. the Safety-Progress Classification of Properties

Yliès Falcone, VERIMAG - University of Grenoble, France
Jean-Claude Fernandez, VERIMAG - University of Grenoble, France
Laurent Mounier, VERIMAG - University of Grenoble, France

On the Verification of Probabilistic I/O Automata with Unspecified Rates

Sergio Giro, FaMAF, Universidad Nacional de Córdoba, Argentina
Pedro R. D'Argenio, FaMAF, Universidad Nacional de Córdoba, Argentina

MON. 10:30 - 12:10 IS: S.PACIFIC BALLROOM #2

(MMV-1) Multimedia and Visualization

Session chair: Simone Diniz Junqueira Barbosa, PUC-Rio, Brazil

Incremental Board: A Grid-Based Space for Visualizing Dynamic Data Sets

Roberto Pinho, Universidade de São Paulo, Brazil
Maria Cristina F. Oliveira, Universidade de São Paulo, Brazil
Alneu de A. Lopes, Universidade de São Paulo, Brazil

Visualization of Clustered Directed Acyclic Graphs with Node Interleaving

Pushpa Kumar, University of Texas at Dallas, United States
Kang Zhang, University of Texas at Dallas, United States

Term Distribution Visualizations with Focus+Context

Moses Schwartz, New Mexico Institute of Mining & Technology, United States
Curtis Hash, New Mexico Institute of Mining & Technology, United States
L.M. Liebrock, New Mexico Institute of Mining & Technology, United States

A Recommendation System for Browsing Digital Libraries

Antonio d'Acierno, ISA-CNR, Italy
Vincenzo Moscato, University of Naples, Italy
Antonio Picariello, University of Naples, Italy
Massimiliano Albanese, University of Maryland, United States
Angelo Chianese, University of Naples, Italy

Information-Theoretic Identification of Content Pages for Analyzing User Information Needs and Actions on the Multimedia Web

Rahul Singh, San Francisco State University, United States
Bibek D. Bhattacharai, San Francisco State University, United States

MON. 10:30 - 12:10 SWD: S.PACIFIC BALLROOM #3

(RTS) Real-Time Systems

Session chair: Paulo Martins, Chaminade University, USA

Resource Sharing in Behavioral based Scheduling

Leo Ordinez, Universidad Nacional del Sur, Argentina
David Donari, Universidad Nacional del Sur, Argentina
Rodrigo Santos, Universidad Nacional del Sur, Argentina
Javier Orozco, Universidad Nacional del Sur, Argentina

Exploiting Stack Distance to Estimate Worst-Case Data Cache Performance

Yu Liu, Southern Illinois University Carbondale, United States
Wei Zhang, Southern Illinois University Carbondale, United States

An Implementation of the Earliest Deadline First Algorithm in Linux

Dario Faggioli, Scuola Superiore Sant'Anna, Italy
Michael Trimarchi, Scuola Superiore Sant'Anna, Italy
Fabio Checconi, Scuola Superiore Sant'Anna, Italy
Marko Bertogna, Scuola Superiore Sant'Anna, Italy
Antonio Mancina, Scuola Superiore Sant'Anna, Italy

An Orthogonal Real-Time Scheduling Architecture for Responsiveness QoS Requirements in SOA Environments

F.J. Monaco, University of São Paulo, Brazil
M. Nery, University of São Paulo, Brazil
M.M.L. Peixoto, University of São Paulo, Brazil

MON. 10:30 - 12:10 AIA: S.PACIFIC BALLROOM #4

(AT) Agreement Technologies

Session chair: Jesus Cerquides, University of Barcelona, Spain

Market-Based Coordination for Intersection Control

Matteo Vasirani, University Rey Juan Carlos, Spain
Sascha Ossowski, University Rey Juan Carlos, Spain

MultiAgent System Adaptation in a Peer-to-Peer Scenario

Jordi Campos Miralles, Universitat de Barcelona, Spain
Maite López-Sánchez, Universitat de Barcelona, Spain
Marc Esteva, Artificial Intelligence Research Institute (IIIA, CSIC), Spain

Organising MAS: A Formal Model based on Organisational Mechanisms

Roberto Centeno, University Rey Juan Carlos, Spain
Holger Billhardt, University Rey Juan Carlos, Spain
Ramón Hermoso, University Rey Juan Carlos, Spain
Sascha Ossowski, University Rey Juan Carlos, Spain

Towards Organizational Agent-Oriented Operating Systems

Javier Palanca, Universidad Politécnica de Valencia, Spain
Vicent Botti, Universidad Politécnica de Valencia, Spain
Ana García-Fornes, Universidad Politécnica de Valencia, Spain

MON. 10:30 - 12:10 DS: HIBISCUS SUITE

(CN-1) Computer Networks

Session chair: Edoardo Biagioni, University of Hawaii, USA

Using Geo-Spatial Session Tagging for Smart Multicast Session Discovery

Piyush Harsh, University of Florida, United States
Richard Newman, University of Florida, United States

Robust Scheduler for Grid Networks

Daniel M. Batista, Institute of Computing, State University of Campinas, Brazil
André C. Drummond, Institute of Computing, State University of Campinas, Brazil
Nelson L.S. da Fonseca, Institute of Computing, State University of Campinas, Brazil

Quality of Service Management in GMPLS-Based Grid OBS Networks

Rafael Esteves, Universidade Federal do Pará, Brazil
Antonio Abelém, Universidade Federal do Pará, Brazil
Michael Stanton, Universidade Federal Fluminense, Brazil

New Content-Aware Request Distribution Policies in Web Clusters Providing Multiple Services

Mei-Ling Chiang, National Chi-Nan University, Taiwan
Chun-Hung Wu, National Chi-Nan University, Taiwan
Yi-Jiun Liao, National Chi-Nan University, Taiwan
Yu-Fen Chen, National Chi-Nan University, Taiwan

12:10 - 13:30

Lunch Break

MON. 13:30 - 15:10 ENG: S.PACIFIC BALLROOM #1

(SVT-2) Software Verification and Testing

Session chair: Tamara Rezk, INRIA, France

Local Reasoning for Abstraction and Sharing

Renato Cherini, FaMAF, Universidad Nacional de Córdoba, Argentina
Javier O. Blanco, FaMAF, Universidad Nacional de Córdoba, Argentina

Reasoning about Comprehensions with First-Order SMT Solvers

K. Rustan M. Leino, Microsoft Research, United States
Rosemary Monahan, National University of Ireland, Ireland

Specifying and Checking Protocols of Multithreaded Classes

Clément Hurlin, INRIA Sophia Antipolis, France

Extended Static Checking in JML4: Benefits of Multiple-Prover Support

Perry R. James, Concordia University, Canada
Patrice Chalin, Concordia University, Canada

Certification of Smart-Card Applications in Common Criteria

Iman Narasamdy, VERIMAG - Université de Grenoble, France
Michaël Périn, VERIMAG - Université de Grenoble, France

MON. 13:30 - 15:10 IS: S.PACIFIC BALLROOM #2

(MMV-2) Multimedia and Visualization

Session chair: Rahul Singh, San Francisco State University, USA

A New Inter-Layer Prediction Scheme for Spatial Scalability with Different Frame Rates

Jinmi Kang, Pusan National University, Korea
Gyeongun Goh, Pusan National University, Korea
Kidong Chung, Pusan National University, Korea

A Smart Clustering Algorithm for Photo Set Obtained from Multiple Digital Cameras

Chuljin Jang, Pusan National University, Korea
Taijin Yoon, Pusan National University, Korea
Hwan-Gue Cho, Pusan National University, Korea

An Enhanced Multi-View Video Compression Using the Constrained Inter-View Prediction

Sunghwan Chun, Pusan National University, Korea
Seoyoung Lee, Pusan National University, Korea
Kwangmu Shin, Pusan National University, Korea
Kidong Chung, Pusan National University, Korea

Discovery of Time Series in Video Data through Distribution of Spatiotemporal Gradients

Omar U. Florez, Utah State University, United States
SeungJin Lim, Utah State University, United States

MON. 13:30 - 15:10 SWD: S.PACIFIC BALLROOM #3

(SEC-1) Computer Security

Session chair: Jaideep Vaidya, Rutgers, The State University of New Jersey, USA

On the Practical Importance of Communication Complexity for Secure Multi-Party Computation Protocols

Florian Kerschbaum, SAP Research, Germany
Daniel Dahlmeier, SAP Research, Germany
Axel Schröpfer, SAP Research, Germany
Debmalya Biswas, IRISA/INRIA, France

Open Source vs. Closed Source Software: Towards Measuring Security

Guido Schryen, International Computer Science Institute, United States
Rouven Kadura, RWTH Aachen University, Germany

Improving Stream Correlation Attacks on Anonymous Networks

Gavin O’Gorman, Dublin City University, Ireland
Stephen Blott, Dublin City University, Ireland

KvmSec: A Security Extension for Linux Kernel Virtual Machines

Flavio Lombardi, Consiglio Nazionale delle Ricerche, Ufficio Sistemi Informativi, Italy
Roberto Di Pietro, Universitat Rovira i Virgili, Spain

Bayesian Bot Detection based on DNS Traffic Similarity

Ricardo Villamarín-Salomón, University of Pittsburgh, United States
José Carlos Brustoloni, University of Pittsburgh, United States

MON. 13:30 - 15:10 AIA: S.PACIFIC BALLROOM #4

(AOMS) Agent-Oriented Software Engineering Methodologies and Systems

Session chair: Matteo Casadei, Alma Mater Studiorum - Università di Bologna, Italy

SoSAA: A Framework for Integrating Components and Agents

Mauro Dragone, University College Dublin, Ireland
David Lillis, University College Dublin, Ireland
Rem Collier, University College Dublin, Ireland
G.M.P. O’Hare, University College Dublin, Ireland

Situated Process Engineering for Integrating Processes from Methodologies to Infrastructures

Ambra Molesini, Università di Bologna, Italy
Elena Nardini, Università di Bologna, Italy
Enrico Denti, Università di Bologna, Italy
Andrea Omicini, Università di Bologna, Italy

agentTool Process Editor: Supporting the Design of Tailored Agent-Based Processes

Juan C. Garcia-Ojeda, Kansas State University, United States
Scott A. DeLoach, Kansas State University, United States
Robby , Kansas State University, United States

A Collaborative Tool for Designing and Enacting Design Processes

M. Cossentino, ICAR-CNR Consiglio Nazionale delle Ricerche, Italy
L. Sabatucci, Università degli Studi di Palermo, Italy
V. Seidita, Università degli Studi di Palermo, Italy
S. Gaglio, Università degli Studi di Palermo, Italy

MON. 13:30 - 15:10 DS: HIBISCUS SUITE

(CN-2) Computer Networks

Session chair: Daniel Macêdo Batista, State University of Campinas, Brazil

Network Protocol Interoperability Testing based on Contextual Signatures and Passive Testing

Fatiha Zaidi, University Paris-Sud, France
Emmanuel Bayse, Stéria Télécom, France
Ana Cavalli, Telecom Sud-Paris, France

Cross-Layer Cooperation between Membership Estimation and Routing

Juan Carlos García, Instituto Tecnológico de Informática, Spain
Stefan Beyer, Instituto Tecnológico de Informática, Spain
Pablo Galdámez, Instituto Tecnológico de Informática, Spain

NECTAR: A DTN Routing Protocol based on Neighborhood Contact History

Etienne C.R. de Oliveira, Instituto de Computação - Universidade Federal Fluminense, Brazil
Célio V.N. de Albuquerque, Instituto de Computação - Universidade Federal Fluminense, Brazil

BPR: A Bit-Level Packet Recovery in Wireless Sensor Networks

Jianping He, Tsinghua University, China
Jiahai Yang, Tsinghua University, China
Changqing An, Tsinghua University, China
Xuenong Li, Tsinghua University, China

15:10 - 15:40

CORAL LOUNGE

Coffee Break

MON. 15:40 - 17:20 ENG: S.PACIFIC BALLROOM #1

(OS-1) Operating Systems

Session chair: Jian-Jia Chen, ETH Zurich

Impact of Function Inlining on Resource-Constrained Embedded Systems

Bongjae Kim, Seoul National University, Korea
Sangho Yi, Seoul National University, Korea
Yookun Cho, Seoul National University, Korea
Jiman Hong, Soongsil University, Korea
Joongjin Kook, Soongsil University, Korea
Hyung-Do Choi, ETRI, Korea

Building a Self-Healing Embedded System in a Multi-OS Environment

Tomohiro Katori, Waseda University, Japan
Lei Sun, Waseda University, Japan
Dennis K. Nilsson, Chalmers University of Technology, Sweden
Tatsuo Nakajima, Waseda University, Japan

DARAW: A New Write Buffer to Improve Parallel I/O Energy-Efficiency

Xiaojun Ruan, Auburn University, United States
Adam Manzanares, Auburn University, United States
Kiranmai Bellam, Auburn University, United States
Xiao Qin, Auburn University, United States
Ziliang Zong, South Dakota School of Mines & Technology, United States

A Real-Time Message Scheduler Support for Dual-Sink Mobile Ad-Hoc Sensor Networks

Junghoon Lee, Cheju National University, Korea
Gyung-Leen Park, Cheju National University, Korea
Shafqat Rehman, Cheju National University, Korea
Sung Tae Jhang, Suwon University, Korea
Mikyung Kang, Information Sciences Institute East, University of Southern California, United States

MON. 15:40 - 17:20 IS: S.PACIFIC BALLROOM #2

(MMV-3) Multimedia and Visualization

Session chair: SeungJin Lim, Utah State University, USA

A New Multimedia Synchronous Distance Learning System: The IVA Study Case

Valter Roesler, Federal University of Rio Grande do Sul, Brazil
Ronaldo Husemann, Federal University of Rio Grande do Sul, Brazil
Carlos Haas Costa, Federal University of Rio Grande do Sul, Brazil

Variable Handling in Time-Based XML Declarative Languages

Luiz Fernando G. Soares, Pontifícia Universidade Católica do Rio de Janeiro, Brazil
Rogério F. Rodrigues, Pontifícia Universidade Católica do Rio de Janeiro / FAST, a Microsoft Subsidiary, Brazil
Renato Cerqueira, Pontifícia Universidade Católica do Rio de Janeiro, Brazil
SimoneDJ Barbosa, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

User-Media Interaction via Interactive TV

Cesar A.C. Teixeira, Universidade Federal de São Carlos, Brazil
Erick L. Melo, Universidade Federal de São Carlos, Brazil
Renan G. Cattelan, Universidade de São Paulo, Brazil
Maria da Graça C. Pimentel, Universidade de São Paulo, Brazil

Ubiquitous Services in Home Networks offered through Digital TV

Giliard Brito de Freitas, Universidade Federal de São Carlos, Brazil
Cesar Augusto Camillo Teixeira, Universidade Federal de São Carlos, Brazil

MON. 15:40 - 17:20 SWD: S.PACIFIC BALLROOM #3

(SEC-2) Computer Security

Session chair: Jaideep Vaidya, Rutgers, The State University of New Jersey, USA

Semi-Supervised Co-Training and Active Learning based Approach for Multi-View Intrusion Detection

Ching-Hao Mao, National Taiwan University of Science & Technology, Taiwan
Hahn-Ming Lee, National Taiwan University of Science & Technology / Academia Sinica, Taiwan
Devi Parikh, Carnegie Mellon University, United States
Tsuhan Chen, Carnegie Mellon University, United States
Si-Yu Huang, National Taiwan University of Science & Technology, Taiwan

Taking Total Control of Voting Systems: Firmware Manipulations on an Optical Scan Voting Terminal

Seda Davtyan, University of Connecticut, United States
Sotiris Kentros, University of Connecticut, United States
Aggelos Kiayias, University of Connecticut, United States
Laurent Michel, University of Connecticut, United States
Nicolas Nicolaou, University of Connecticut, United States
Alexander Russell, University of Connecticut, United States
Andrew See, University of Connecticut, United States
Narasimha Shashidhar, University of Connecticut, United States
Alexander A. Shvartsman, University of Connecticut, United States

SQLProb: A Proxy-Based Architecture towards Preventing SQL Injection Attacks

Anyi Liu, George Mason University, United States
Yi Yuan, George Mason University, United States
Duminda Wijesekera, George Mason University, United States
Angelos Stavrou, George Mason University, United States

Secure Web-Based Retrieval of Documents with Usage Controls

Peter Djalaliev, University of Pittsburgh, United States
José Carlos Brustoloni, University of Pittsburgh, United States

Privacy-Preserving Linear Programming

Jaideep Vaidya, Rutgers University, United States

MON. 15:40 - 17:20 AIA: S.PACIFIC BALLROOM #4

(SOPDS) Self-Organization in Pervasive Distributed Systems

Session chair: Matteo Casadei, Alma Mater Studiorum - Università di Bologna, Italy

Keeping Diversity when Exploring Dynamic Environments

Jose Luis Fernandez-Marquez, Artificial Intelligence Research Institute, Spanish National Research Council, Spain
Josep Lluís Arcos, Artificial Intelligence Research Institute, Spanish National Research Council, Spain

Geographical Data Collection in Sensor Networks with Self-Organizing Transaction Cluster-Heads

Neeraj Rajgure, National Institute of Informatics/New Jersey Institute of Technology, United States
Eric Platon, National Institute of Informatics, Japan
Cristian Borcea, New Jersey Institute of Technology, United States
Shinichi Honiden, National Institute of Informatics, Japan

Prestige-Based Peer Sampling Service: Interdisciplinary Approach to Secure Gossip

Gian Paolo Jesi, University of Bologna, Italy
Edoardo Mollona, University of Bologna, Italy
Srijith K. Nair, Vrije Universiteit Amsterdam, Netherlands
Maarten van Steen, Vrije Universiteit Amsterdam, Netherlands

Flexible Self-Healing Gradients

Jacob Beal, BBN Technologies, United States

Self-Organized Control of Knowledge Generation in Pervasive Computing Systems

Gabriella Castelli, University of Modena & Reggio Emilia, Italy
Ronaldo Menezes, Florida Tech, United States
Franco Zambonelli, University of Modena & Reggio Emilia, Italy

MON. 15:40 - 17:20

DS: HIBISCUS SUITE

(CN-3) Computer Networks

Session chair: Fatiha Zaidi, University Paris-Sud, France

Practical Distributed Voter-Verifiable Secret Ballot System

Edoardo Biagioni, University of Hawaii, United States
Yingfei Dong, University of Hawaii, United States
Wesley Peterson, University of Hawaii, United States
Kazuo Sugihara, Univ of Hawaii, United States

A Holistic Mechanism Against File Pollution in Peer-to-Peer Networks

Zhuhua Cai, Institute of Software, School of Electronics Engineering & Computer Science, Peking University, China
Ruichuan Chen, Institute of Software, School of Electronics Engineering & Computer Science, Peking University, China
Jianqiao Feng, Institute of Software, School of Electronics Engineering & Computer Science, Peking University, China
Cong Tang, Institute of Software, School of Electronics Engineering & Computer Science, Peking University, China
Zhong Chen, Institute of Software, School of Electronics Engineering & Computer Science, Peking University, China
Jianbin Hu, Institute of Software, School of Electronics Engineering & Computer Science, Peking University, China

DoSTRACK: A System for Defending Against DoS Attacks

Udaya Kiran Tupakula, Macquarie University, Australia
Vijay Varadharajan, Macquarie University, Australia
Srini Rao Pandalaneni, Hewlett Packard, Australia

Secure Routing in Peer-to-Peer Distributed Hash Tables

Keith Needels, Rochester Institute of Technology, United States
Minseok Kwon, Rochester Institute of Technology, United States

Multi-Step Attack Modelling and Simulation (MsAMS) Framework based on Mobile Ambients

Virginia N.L. Franqueira, University of Twente, Netherlands
Raul H.C. Lopes, Brunel University, United Kingdom
Pascal van Eck, University of Twente, Netherlands

MON. 18:00 - 19:00 CORAL BALLROOM #1
SIGAPP Annual Business Meeting

MON. 19:00 CORAL BALLROOM #4
SAC Reception (Hosted by SIGAPP)

Tuesday March 10, 2009

TUE. 9:00 – 12:00 CORAL LOUNGE
Poster Session 1

Posters of the following tracks: AOMS, BIO, CAHC, CF, CIIA, CM, CN, DADS, DM, DS, EC, EIS, GCR, HCI, IAR, SOAP, SWA (see the detailed list of posters at page 28.)

TUE. 08:20 - 10:00 ENG: S.PACIFIC BALLROOM #1

(OS-2) Operating Systems

Session chair: Jiman Hong, Soongsil University, Korea

Fast Networking with Socket-Outsourcing in Hosted Virtual Machine Environments

Hideki Eiraku, University of Tsukuba, Japan
Yasushi Shinjo, University of Tsukuba, Japan
Calton Pu, Georgia Institute of Technology, United States
Younggyun Koh, Georgia Institute of Technology, United States
Kazuhiko Kato, University of Tsukuba, Japan

CPS-SIM: Configurable and Accurate Clock Precision Solid State Drive Simulator

Jongmin Lee, University of Seoul, Korea
Eujoon Byun, University of Seoul, Korea
Hanmook Park, INDILINX.Co.,Ltd., Korea
Jongmoo Choi, Dankook University, Korea
Donghee Lee, University of Seoul, Korea
Sam H. Noh, Hongik University, Korea

Simplifying Security Policy Descriptions for Internet Servers in Secure Operating Systems

Toshihiro Yokoyama, Keio University, Japan
Miyuki Hanaoka, Keio University, Japan
Makoto Shimamura, Keio University, Japan
Kenji Kono, Keio University, Japan

Response Time Analysis of Software Transactional Memory-Based Distributed Real-Time Systems

Sherif F. Fahmy, Virginia Tech, United States
Binoy Ravindran, Virginia Tech, United States
E.D Jensen, The MITRE Corporation, United States

TUE. 08:20 - 10:00 IS: S.PACIFIC BALLROOM #2

(DTTA-1) Data Theory, Technology, and Applications

Session chair: Junping Sun, Nova Southeastern University, USA

Exploiting Join Cardinality for Faster Hash Joins

Michael Henderson, University of British Columbia Okanagan, Canada
Bryce Cutt, University of British Columbia Okanagan, Canada
Ramon Lawrence, University of British Columbia Okanagan, Canada

Approximate Indexing in Road Network Databases

Sang-Chul Lee, Hanyang University, Korea
Sang-Wook Kim, Hanyang University, Korea
Junghoon Lee, Cheju National University, Korea
Jae Soo Yoo, Chungbuk National University, Korea

Computing Data Cubes Using Exact Sub-Graph Matching: The Sequential MCG Approach

Joubert de Castro Lima, Instituto Tecnológico de Aeronáutica, Brazil

Celso Massaki Hirata, Instituto Tecnológico de Aeronáutica, Brazil

Information Retrieval from Visual Databases Using Multiple Representations and Multiple Queries

Noureddine Abbadeni, Al-Ain University of Science & Technology, United Arab Emirates

CPref-SQL: A Query Language Supporting Conditional Preferences

Sandra de Amo, Federal University of Uberlandia, Brazil

Marcos Roberto Ribeiro, Federal University of Uberlandia, Brazil

TUE. 08:20 - 10:00 SWD: S.PACIFIC BALLROOM #3

(CM) Coordination Models, Languages and Applications

Session chair: Michael Schumacher, University of Applied Sciences Western, Switzerland

Knowledge-Based Coordination with a Reliable Semantic Subscription Mechanism

Martin Murth, Institute of Computer Languages, Vienna University of Technology, Austria

Eva Kühn, Institute of Computer Languages, Vienna University of Technology, Austria

Situated Tuple Centres in ReSpecT

Matteo Casadei, Università di Bologna, Italy

Andrea Omicini, Università di Bologna, Italy

A Framework for Modelling and Implementing Self-Organising Coordination

Mirko Viroli, Università di Bologna, Italy

Matteo Casadei, Università di Bologna, Italy

Andrea Omicini, Università di Bologna, Italy

On-Line Adaptation of Sequential Mobile Processes Running Concurrently

Massimiliano de Leoni, SAPIENZA - Università di Roma, Italy

Giuseppe De Giacomo, SAPIENZA - Università di Roma, Italy

Yves Lespérance, York University, Canada

Massimo Mecella, SAPIENZA - Università di Roma, Italy

Decomposing Port Automata

Christian Koehler, CWI, Netherlands

Dave Clarke, Katholieke Universiteit Leuven, Belgium

TUE. 08:20 - 10:00 AIA: S.PACIFIC BALLROOM #4

(DADS-1) Dependable and Adaptive Distributed Systems

Session chair: Karl M. Goeschka, Vienna University of Technology, Austria

A Framework for Dynamic Adaptation of Power-Aware Server Clusters

Vinicius Petrucci, Fluminense Federal University, Brazil

Orlando Loques, Fluminense Federal University, Brazil

Daniel Mossé, University of Pittsburgh, United States

Adaptive Resource Management Architecture for Distributed Real-Time Embedded Systems

Ke Liang, Northwestern Polytechnical University, China

Xingshe Zhou, Northwestern Polytechnical University, China

Ruiqing Sheng, Northwestern Polytechnical University, China

Kailong Zhang, Northwestern Polytechnical University, China

Formalizing the Notion of Adaptive System Behavior

M. Broy, Technische Universität München, Germany

C. Leuxner, Technische Universität München, Germany

W. Sitou, Technische Universität München, Germany

B. Spanfelner, Technische Universität München, Germany

S. Winter, Technische Universität München, Germany

ATM: An Automatic Trust Monitoring Algorithm for Service Software

Mohammad Gias Uddin, Queen's University, Canada

Mohammad Zulkernine, Queen's University, Canada

Supporting Recovery, Privacy and Security in RFID Systems Using a Robust Authentication Protocol

Endadul Hoque, Marquette University, United States

Farzana Rahman, Marquette University, United States

Sheikh Iqbal Ahamed, Marquette University, United States

TUE. 08:20 - 10:00

APP: HIBISCUS SUITE

(CAHC-1) Computer Application in Health Care

Session chair: Fátima Nunes, Universidade de São Paulo, Brazil

HIVSetSubtype: Software for Subtype Classification of HIV-1 Sequences

Luciano V. de Araujo, University of São Paulo, Brazil

Sabri S. Sanabani, Federal University of São Paulo, Brazil

Ester C. Sabino, University of São Paulo, Brazil

João E. Ferreira, University of São Paulo, Brazil

An Ontology-Based Application in Heart Electrophysiology: Representation, Reasoning and Visualization on the Web

Bernardo Gonçalves, UFES (Federal University of Espírito Santo), Brazil

Veruska Zamborlini, Federal University of Espírito Santo (UFES), Brazil

Giancarlo Guizzardi, Federal University of Espírito Santo (UFES), Brazil

José G. Pereira Filho, Federal University of Espírito Santo (UFES), Brazil

Thin Client Architecture in Support of Remote Radiology Learning

Florian F. Schmitzberger, Stanford University, United States

Justus Roos, Stanford University, United States

Sandy Napel, Stanford University, United States

Geoffrey D. Rubin, Stanford University, United States

David Paik, Stanford University, United States

A Framework of a Logic-Based Question-Answering System for the Medical Domain (LOQAS-Med)

Sofia J. Athenikos, Drexel University, United States

Hyoil Han, Drexel University, United States

Ari D. Brooks, Drexel University, United States

10:00 - 10:30

CORAL LOUNGE

Coffee Break

TUE. 10:30 - 12:10 ENG: S.PACIFIC BALLROOM #1

(OE-1) Organizational Engineering

Session chair: Robert Winter, University of St. Gallen,
Switzerland

**Towards a Fast Enterprise Ontology based Method
for Post Merger Integration**

Martin Op't Land, Delft University of Technology, Netherlands
Hans Zwitser, KLM Cargo, Netherlands
Paul Ensink, KLM, Netherlands
Quentin Lebel, Air France Cargo, France

**Operational Control of Service Processes:
Modularization as Precondition**

Diana Heckl, Frankfurt School of Finance & Management, Germany
Jürgen Moormann, Frankfurt School of Finance & Management,
Germany

A Role-Based Enterprise Architecture Framework

Artur Caetano, CODE, INESC INOV, IST, Technical University of
Lisbon, Portugal
António Rito Silva, CODE, INESC INOV, IST, Technical University
of Lisbon, Portugal
José Tribolet, CODE, INESC INOV, IST, Technical University of
Lisbon, Portugal

**Towards a Maturity Model for Corporate Data
Quality Management**

Kai M. Hüner, Institute of Information Management, University of
St. Gallen, Switzerland
Martin Ofner, Institute of Information Management, University of
St. Gallen, Switzerland
Boris Otto, Institute of Information Management, University of St.
Gallen, Switzerland

TUE. 10:30 - 12:10 IS: S.PACIFIC BALLROOM #2

**(DTTA-2) Data Theory, Technology, and
Applications**

Session chair: Junping Sun, Nova Southeastern University,
USA

**Enhancing XML Data Warehouse Query
Performance by Fragmentation**

Hadj Mahboubi, University of Lyon, France
Jérôme Darmont, University of Lyon, France

**Retrieving Valid Matches for XML Keyword
Search**

Lingbo Kong, INRIA Futurs, France
Rémi Gilleron, INRIA Futurs, France
Aurélien Lemay, INRIA Futurs, France

Fuzzy Data Modeling Based on XML Schema

Li Yan, Northeastern University, China
Z.M. Ma, Northeastern University, China
Jian Liu, Northeastern University, China

Privacy Protection for RFID Data

Benjamin C.M. Fung, Concordia University, Canada
Ming Cao, Concordia University, Canada
Bipin C. Desai, Concordia University, Canada
Heng Xu, Penn State University, United States

**Learning the Ontological Theory of an Information
Extraction System in the Multi-Predicate ILP
Setting**

Alain-Pierre Manine, Laboratoire d'Informatique de l'université
Paris-Nord (LIPN), France

TUE. 10:30 - 12:10 SWD: S.PACIFIC BALLROOM #3

(SIM) Advances in Computer Simulation

Session chair: Giuseppe Vizzari, University of Milano-Bicocca,
Italy

**An Extensible Simulation Tool for Overlay
Networks and Services**

Jordi Pujol-Ahulló, Universitat Rovira i Virgili, Spain
Pedro García-López, Universitat Rovira i Virgili, Spain
Marc Sánchez-Artigas, Universitat Rovira i Virgili, Spain
Marcel Arrufat-Arias, Universitat Rovira i Virgili, Spain

**Composing a High Fidelity HLA Federation for
Littoral Operations**

Fawzi Hassaine, Defence R & D, Canada
Russ Moulton, JRM Technologies, United States
Chris Fink, JRM Technologies, United States

**Simulating Human Intuitive Decisions by
Q-Learning**

Jason Leezer, Trinity University, United States
Yu Zhang, Trinity University, United States

Simulating Antigenic Drift and Shift in Influenza A

Nuno Fachada, LaSEEB-ISR, Portugal
Vitor V. Lopes, INETI - Instituto Nacional de Engenharia,
Tecnologia e Inovação, Portugal
Agostinho Rosa, LaSEEB-ISR, Portugal

**Simulation Supporting the Design of
Self-Organizing Ambient Intelligence Systems**

Stefania Bandini, University of Milano-Bicocca, Italy
Andrea Bonomi, University of Milano-Bicocca, Italy
Giuseppe Vizzari, University of Milano-Bicocca, Italy

TUE. 10:30 - 12:10 AIA: S.PACIFIC BALLROOM #4

**(DADS-2) Dependable and Adaptive
Distributed Systems**

Session chair: Rui Carlos Oliveira, Universidade do Minho,
Portugal

**Adaptive Optimal Checkpoint Interval and Its
Impact on System's Overall Quality in Soft
Real-Time Applications**

Nianen Chen, Illinois Institute of Technology, United States
Shangping Ren, Illinois Institute of Technology, United States

Latency-Aware Leader Election

Nuno Santos, École Polytechnique Fédérale de Lausanne (EPFL),
Switzerland
Martin Hutle, École Polytechnique Fédérale de Lausanne (EPFL),
Switzerland
André Schiper, École Polytechnique Fédérale de Lausanne (EPFL),
Switzerland

**Boosting the Performance of Computing Systems
through Adaptive Configuration Tuning**

Haifeng Chen, NEC Laboratories America, United States
Guofei Jiang, NEC Laboratories America, United States
Hui Zhang, NEC Laboratories America, United States
Kenji Yoshihira, NEC Laboratories America, United States

**Efficient Maintenance of Distributed Data in
Highly Dynamic Opportunistic Grids**

Raphael Y. de Camargo, University of São Paulo, Brazil
Fernando Castor Filho, University of Pernambuco, Brazil
Fabio Kon, University of São Paulo, Brazil

Dynamic Planning and Weaving of Dependability Concerns for Self-Adaptive Ubiquitous Services

Romain Rouvoy, University of Oslo, Norway
Frank Eliassen, University of Oslo, Norway
Mikaël Beauvois, University of Oslo, Norway

TUE. 10:30 - 12:10

APP: HIBISCUS SUITE

(CAHC-2) Computer Application in Health Care

Session chair: Luciano Araújo, Universidade de São Paulo, Brazil

Medical Volume Segmentation Using Bank of Gabor Filters

Adebayo Olowoyeye, Indiana University, United States
Mihran Tuceryan, Indiana University Purdue University Indianapolis, United States
Shiaofen Fang, Indiana University Purdue University Indianapolis, United States

Evaluation of VR Medical Training Applications under the Focus of Professionals of the Health Area

Cléber Gimenez Corrêa, Centro Universitário Eurípides de Marília (UNIVEM), Brazil
Fátima L.S. Nunes, Escola de Artes, Ciências e Humanidades – Universidade de São Paulo (EACH/USP), Brazil
Adriano Bezerra, Centro Universitário Eurípides de Marília (UNIVEM), Brazil
Paulo M. Carvalho Jr., Faculdade de Medicina de Marília (FAMEMA), Brazil

Task Based Visualization of 5D Brain EIT Data

Yan Zhang, University of Hull, United Kingdom
Peter J. Passmore, Middlesex University, United Kingdom
Richard H. Bayford, Middlesex University, United Kingdom

Augmented Reality Environment for Life Support Training

Fabrcio Pretto, PUCRS, Brazil
Isabel Harb Manssour, PUCRS, Brazil
Maria H. Itaqui Lopes, PUCRS, Brazil
Emerson Rodrigues da Silva, PUCRS, Brazil
Márcio Sarroglia Pinho, PUCRS, Brazil

Facial Image Classification of Mouse Embryos for the Animal Model Study of Fetal Alcohol Syndrome

Shiaofen Fang, Indiana University Purdue University Indianapolis, United States
Ying Liu, Indiana University Purdue University Indianapolis, United States
Jeffrey Huang, Indiana University Purdue University Indianapolis, United States
Sophia Vinci-Booher, Indiana University Medical Center, United States
Bruce Anthony, Indiana University Medical Center, United States
Feng Zhou, Indiana University Medical Center, United States

12:10 - 13:30

CORAL BALLROOM #4

SAC General Luncheon

TUE. 14:00 - 17:00

CORAL LOUNGE

Poster Session 2

Posters of the following tracks: CS, CSP, DTTA, EMBS, MCA, MMV, OE, OS, PL, RE, ROBOT, RTS, SE, SIM, SOPDS, TRECK, WSN, WT (see the detailed list of posters at page 28.)

TUE. 13:30 - 15:10 ENG: S.PACIFIC BALLROOM #1

(OE-2) Organizational Engineering

Session chair: Artur Caetano, Technical University of Lisbon, Portugal

Concern-Oriented Business Architecture Engineering

Stephan Kurpjuweit, Institute of Information Management, University of St. Gallen, Switzerland
Robert Winter, Institute of Information Management, University of St. Gallen, Switzerland

Collaborative Workflow Assistant for Organizational Effectiveness

Joe Bolinger, The Ohio State University, United States
Greg Horvath, The Ohio State University, United States
Jay Ramanathan, The Ohio State University, United States
Rajiv Ramnath, The Ohio State University, United States

Collaborative Modeling of Business Processes – A Comparative Case Study

Peter Rittgen, Vlerick Leuven Gent Management School, Belgium

The People, the Process or the Technology? Using the ACE Framework to make Tradeoffs in Service Delivery Improvement

Jay Ramanathan, The Ohio State University, United States
Rajiv Ramnath, The Ohio State University, United States
Randall Glasgow, Cardinal Health, United States

TUE. 13:30 - 15:10

IS: S.PACIFIC BALLROOM #2

(DS) Data Streams

Session chair: Gerson Zaverucha, Federal University of Rio de Janeiro, Brazil

Parameterless Outlier Detection in Data Streams

Alice Marascu, INRIA, France
Florent Masseglia, INRIA, France

Online Annotation and Prediction for Regime Switching Data Streams

Gordon J. Ross, Institute of Mathematical Sciences, Imperial College London, United Kingdom
Dimitris K. Tasoulis, Imperial College London, United Kingdom
Niall M. Adams, Imperial College London, United Kingdom
David J. Hand, Imperial College London, United Kingdom

Link-Based Event Detection in Email Communication Networks

Xiaomeng Wan, Dalhousie University, Canada
Evangelos Milios, Dalhousie University, Canada
Nauzer Kalyaniwalla, Dalhousie University, Canada
Jeannette Janssen, Dalhousie University, Canada

Adaptive Burst Detection in a Stream Engine

Marcel Karnstedt, Ilmenau University of Technology, Germany
Daniel Klan, Ilmenau University of Technology, Germany
Christian Pöhlitz, Ilmenau University of Technology, Germany
Kai-Uwe Sattler, Ilmenau University of Technology, Germany
Conny Franke, University of California, Davis, United States

Evaluating Algorithms that Learn from Data Streams

João Gama, University of Porto, Portugal
Pedro Pereira Rodrigues, University of Porto, Portugal
Raquel Sebastião, University of Porto, Portugal

TUE. 13:30 - 15:10 SWD: S.PACIFIC BALLROOM #3

(CSP) Constraint Solving and Programming

Session chair: Sebastian Brand, University of Melbourne, Australia

LS(Graph & Tree): A Local Search Framework for Constraint Optimization on Graphs and Trees

Pham Quang Dung, University of Louvain, Belgium
Yves Deville, University of Louvain, Belgium
Pascal Van Hentenryck, Brown University, United States

Exploiting Weak Dependencies in Tree-Based Search

Alejandro Arbelaez, Microsoft-INRIA, France
Youssef Hamadi, Microsoft Research, United Kingdom

Softening Gcc and Regular with Preferences

Jean-Philippe Métivier, University of Caen, France
Patrice Boizumault, University of Caen, France
Samir Loudni, University of Caen, France

Length-Lex Bound Consistency for Knapsack Constraints

Justin Yip, Brown University, United States
Pascal Van Hentenryck, Brown University, United States

Message-Passing and Local Heuristics as Decimation Strategies for Satisfiability

Lukas Kroc, Cornell University, United States
Ashish Sabharwal, Cornell University, United States
Bart Selman, Cornell University, United States

TUE. 13:30 - 15:10 AIA: S.PACIFIC BALLROOM #4

(TRECK) Trust, Reputation, Evidence and other Collaboration Know-how

Session chair: Jean-Marc Seigneur, University of Geneva, Switzerland

iTrustU: A Blog Recommender System based on Multi-Faceted Trust and Collaborative Filtering

Ting-Chun Peng, Institute for Information Industry, Taiwan
Seng-cho T. Chou, National Taiwan University, Taiwan

A Personalized Framework for Trust Assessment

Trung Dong Huynh, University of Southampton, United Kingdom

Extending Bayesian Trust Models Regarding Context-Dependence and User Friendly Representation

Sebastian Ries, Technische Universität Darmstadt, Germany

A Taxonomy and Adversarial Model for Attacks against Network Log Anonymization

Justin King, IBM Rochester, United States
Kiran Lakkaraju, University of Illinois, United States
Adam Slagell, University of Illinois, United States

Defending Online Reputation Systems against Collaborative Unfair Raters through Signal Modeling and Trust

Yafei Yang, University of Rhode Island, United States
Yan (Lindsay) Sun, University of Rhode Island, United States
Steven Kay, University of Rhode Island, United States
Qing Yang, University of Rhode Island, United States

TUE. 13:30 - 15:10

APP: HIBISCUS SUITE

(BIO-1) Bioinformatics

Session chair: Mathew Palakal, Indiana University School of Informatics, USA

A New Probabilistic Generative Model of Parameter Inference in Biochemical Networks

P. Lecca, Centre for Computational & Systems Biology, The Microsoft Research - University of Trento, Italy
A. Palmisano, Centre for Computational & Systems Biology, The Microsoft Research - University of Trento, Italy
C. Priami, Centre for Computational & Systems Biology, The Microsoft Research - University of Trento, Italy
G. Sanguinetti, University of Sheffield, United Kingdom

Construct Anticancer Drug-Drug Correlation Network

Jiao Li, Tsinghua University, China
Pamela Crowell, Idaho State University, United States
Jake Yue Chen, Indiana University Purdue University Indianapolis, United States

An Improved Shrinkage Estimator to Infer Regulatory Networks with Gaussian Graphical Models

Kevin Kontos, Université Libre de Bruxelles, Belgium
Gianluca Bontempi, Université Libre de Bruxelles, Belgium

Using Dynamic Bayesian Networks to Infer Gene Regulatory Networks from Expression Profiles

Akther Shermin, Macquarie University, Australia
Mehmet A. Orgun, Macquarie University, Australia

15:10 - 15:40

CORAL LOUNGE

Coffee Break

TUE. 15:40 - 17:20 ENG: S.PACIFIC BALLROOM #1

(HCI-1) Human-Computer Interaction

Session chair: Brent Auernheimer, California State University, Fresno, USA

Towards "WYDIWYS" for MIMI Using Concept Analysis

Jie Dai, Cleveland Clinic, United States
Remo Mueller, Case Western Reserve University, United States
Jacek Szymanski, Case Western Reserve University, United States
Guo-Qiang Zhang, Case Western Reserve University, United States

Learners Automated Evaluation with the ODALA Approach

Farida Bouarab-Dahmani, Tizi-Ouzou University, Algeria
Malik Si-Mohammed, Tizi-Ouzou University, Algeria
Catherine Comparot, Mirail University, France
Pierre-Jean Charrel, Mirail University, France

Expert System for Supporting Conformity Inspections of Software Application Interfaces to the ISO 9241

Lorena Lira de Menezes, Federal University of Campina Grande, Brazil
Mariana Romão do Nascimento, Federal University of Campina Grande, Brazil
José Eustáquio Rangel de Queiroz, Federal University of Campina Grande, Brazil
Joseana Macedo Fachine, Federal University of Campina Grande, Brazil

A Generic Library for GUI Reasoning and Testing

João Carlos Silva, Universidade do Minho, Portugal
João Saraiva, Universidade do Minho, Portugal
José Creissac Campos, Universidade do Minho, Portugal

Using Web Accessibility Patterns for Web Application Development

Sabina Jeschke, University of Stuttgart, Germany
Olivier Pfeiffer, Technische Universität Berlin, Germany
Helmut Vieritz, University of Stuttgart, Germany

TUE. 15:40 - 17:20 IS: S.PACIFIC BALLROOM #2

(ASIIS) Advances in Spatial and Image-based Information Systems

Session chair: Ki-Joune Li, Pusan National University, Korea

Similarity Measures for Trajectory of Moving Objects in Cellular Space

Hye-Young Kang, Pusan National University, Korea
Joon-Seok Kim, Pusan National University, Korea
Ki-Joune Li, Pusan National University, Korea
Jung-Rae Hwang, Pusan National University, Korea

GPU-Based Computation of Distance Functions on Road Networks with Applications

Marta Fort, Institut d'Informàtica i Aplicacions, Universitat de Girona, Spain
J. Antoni Sellares, Institut d'Informàtica i Aplicacions, Universitat de Girona, Spain

A Spatial Bitmap-Based Index for Geographical Data Warehouses

Thiago Luís Lopes Siqueira, Universidade Federal de São Carlos, Brazil
Ricardo Rodrigues Ciferri, Universidade Federal de São Carlos, Brazil
Valéria Cesário Times, Universidade Federal de Pernambuco, Brazil
Cristina Dutra de Aguiar Ciferri, Universidade Federal de São Paulo, Brazil

Labeled Images Verification Using Gaussian Mixture Models

Micheal Baechler, University of Fribourg, Switzerland
Jean-Luc Bloechle, University of Fribourg, Switzerland
Andreas Humm, University of Fribourg, Switzerland
Rolf Ingold, University of Fribourg, Switzerland
Jean Hennebert, University of Applied Science, Switzerland

TUE. 15:40 - 17:20 SWD: S.PACIFIC BALLROOM #3

(PSC) Programming for Separation of Concerns

Session chair: Emiliano Tramontana, Università di Catania, Italy

Flexible Features: Making Feature Modules more Reusable

Peter Ebraert, Vrije Universiteit Brussel, Belgium
Jorge Vallejos, Vrije Universiteit Brussel, Belgium
Yves Vandewoude, Katholieke Universiteit Leuven, Belgium
Theo D'Hondt, Vrije Universiteit Brussel, Belgium
Yolande Berbers, Katholieke Universiteit Leuven, Belgium

Building a Customizable Embedded Operating System with Fine-Grained Joinpoints Using the AOX Programming Environment

Jiyong Park, Seoul National University, Korea
Seongsoo Hong, Seoul National University, Korea

An Implementation Substrate for Languages Composing Modularized Crosscutting Concerns

Hans Schippers, University of Antwerp, Belgium
Michael Haupt, Hasso-Plattner-Institut, University of Potsdam, Germany
Robert Hirschfeld, Hasso-Plattner-Institut, University of Potsdam, Germany
Dirk Janssens, University of Antwerp, Belgium

Aspect-Oriented Procedural Content Engineering for Game Design

Walter Cazzola, Università di Milano, Italy
Diego Colombo, Microsoft Ireland Research, Ireland
Duncan Harrison, Realtime Worlds, United Kingdom

TUE. 15:40 - 17:20 AIA: S.PACIFIC BALLROOM #4

(GCR) Geometric Constraints and Reasoning

Session chair: Xiao-Shan Gao, Chinese Academy of Sciences, China

Formalizing Desargues' Theorem in Coq Using Ranks

Nicolas Magaud, Université de Strasbourg, France
Julien Narboux, Université de Strasbourg, France
Pascal Schreck, Université de Strasbourg, France

Infinite Bar-Joint Frameworks

J.C. Owen, D-Cubed, Siemens PLM Software Ltd., United Kingdom
S.C. Power, Lancaster University, United Kingdom

Characterizing 1-Dof Henneberg-I Graphs with Efficient Configuration Spaces (Extended Abstract)

Heping Gao, University of Florida, United States
Meera Sitharam, University of Florida, United States

Body-and-Cad Geometric Constraint Systems

Kirk Haller, SolidWorks Corporation, United States
Audrey Lee-St. John, Mount Holyoke College, United States
Meera Sitharam, University of Florida, United States
Ileana Streinu, Smith College, United States
Neil White, University of Florida, United States

Origami Fold as Algebraic Graph Rewriting

Tetsuo Ida, University of Tsukuba, Japan
Hidekazu Takahashi, University of Tsukuba, Japan

TUE. 15:40 - 17:20

APP: HIBISCUS SUITE

(BIO-2) Bioinformatics

Session chair: Mathew Palakal, Indiana University School of Informatics, USA

HSP-HMMER: A Tool for Protein Domain Identification on a Large Scale

Bhanu Rekapalli, Joint Institute of Computational Sciences (UTK-ORNL), United States
Christian Halloy, Joint Institute of Computational Sciences (UTK-ORNL), United States
Igor B. Zhulin, Joint Institute of Computational Sciences (UTK-ORNL), United States

A New Protein Motif Extraction Framework based on Constrained Co-Clustering

Francesca Cordero, University of Torino, Italy
Alessia Visonti, University of Torino, Italy
Marco Botta, University of Torino, Italy

Global-to-Local Representation and Visualization of Molecular Surfaces Using Deformable Models

Nicolay Postarnakevich, San Francisco State University, United States
Rahul Singh, San Francisco State University, United States

A Novel Approach to Detect Copy Number Variation Using Segmentation and Genetic Algorithm

Chihyun Park, Yonsei University, Korea
Youngmi Yoon, Yonsei University - Gachon University of Medicine & Science, Korea
Jaegyoan Ahn, Yonsei University, Korea
Myungjin Moon, Yonsei University, Korea
Sanghyun Park, Yonsei University, Korea

TUE. 18:00 - 19:00 CORAL BALLROOM #2
Future SAC Organization Meeting

Wednesday March 11, 2009

WED. 8:20 - 10:00 CORAL BALLROOM 1-2
Keynote Address

Astronomy in Hawaii: Exploring Our Universe with the Largest Telescopes in the World

Dr. Rolf-Peter Kudritzki
Director of the University of Hawaii's Institute for Astronomy, USA

See details at page 5

15:10 - 15:40 CORAL LOUNGE
Coffee Break

WED. 10:30 - 12:10 ENG: S.PACIFIC BALLROOM #1

(HCI-2) Human-Computer Interaction

Session chair: Brent Auernheimer, California State University, Fresno, USA

Evaluating the Affective Tactics of an Emotional Pedagogical Agent

Patrícia Augustin Jaques, PIPCA/UNISINOS, Brazil
Matheus Lehmann, PIPCA/UNISINOS, Brazil
Sylvie Pesty, Laboratoire d'Informatique de Grenoble, France

Developing and Evaluating Web Multimodal Interfaces – A Case Study with Usability Principles

Americo Talarico Neto, Universidade de São Paulo - Instituto de Ciências Matemáticas e de Computação, Brazil
Thiago Jabur Bittar, Universidade de São Paulo - Instituto de Ciências Matemáticas e de Computação, Brazil
Renata P.M. Fortes, Universidade de São Paulo - Instituto de Ciências Matemáticas e de Computação, Brazil
Kátia Felizardo, Universidade de São Paulo - Instituto de Ciências Matemáticas e de Computação, Brazil

A Pointing Method Using Two Accelerometers for Wearable Computing

Yohei Tokoro, Kobe University, Japan
Tsutomu Terada, Kobe University, Japan
Masahiko Tsukamoto, Kobe University, Japan

Requirements Engineering Using Appreciative Inquiry for an Online Community of Caregivers of Children with Autism

Carol (Heins) Gonzales, Claremont Graduate University, United States
Gondy Leroy, Claremont Graduate University, United States
Gianluca de Leo, Old Dominion University, United States

Towards the Universal Semantic Assessment of Accessibility

Rui Lopes, LaSIGE/University of Lisbon, Portugal
Konstantinos Votis, CERTH-ITI / University of Patras, Greece
Luis Carriço, LaSIGE/University of Lisboa, Portugal
Dimitrios Tzovaras, CERTH-ITI, Greece
Spiridon Likothanassis, University of Patras, Greece

WED. 10:30 - 12:10 IS: S.PACIFIC BALLROOM #2

(DM-1) Data Mining

Session chair: Toon Calders, Eindhoven University of Technology, Netherlands

A Recommender System for Requirements Elicitation in Large-Scale Software Projects

Carlos Castro-Herrera, DePaul University, United States
Chuan Duan, DePaul University, United States
Jane Cleland-Huang, DePaul University, United States
Bamshad Mobasher, DePaul University, United States

A Novel Distance-Based Classifier Built on Pattern Ranking

Dipankar Bachar, Università degli Studi di Torino, Italy
Rosa Meo, Università degli Studi di Torino, Italy

Frequent Spatio-Temporal Patterns in Trajectory Data Warehouses

L. Leonardi, Università Ca' Foscari, Italy
S. Orlando, Università Ca' Foscari, Italy
A. Raffaetà, Università Ca' Foscari, Italy
A. Roncato, Università Ca' Foscari, Italy
C. Silvestri, Università Ca' Foscari, Italy

Optimal Candidate Generation in Spatial Co-Location Mining

Zhongshan Lin, Utah State University, United States
SeungJin Lim, Utah State University, United States

WED. 10:30 - 12:10 SWD: S.PACIFIC BALLROOM #3

(OOPS) Object Oriented Programming Languages and Systems

Session chair: Alex Buckley, Sun Microsystems, USA

Matching ThisType to Subtyping

Chieri Saito, Kyoto University, Japan
Atsushi Igarashi, Kyoto University, Japan

Static Type Inference for Ruby

Michael Furr, University of Maryland, United States
Jong-hoon (David) An, University of Maryland, United States
Jeffrey S. Foster, University of Maryland, United States
Michael Hicks, University of Maryland, United States

Representing Refactoring Opportunities

Eduardo Piveta, Universidade Federal do Pampa, Brazil
Marcelo Pimenta, Universidade Federal do Rio Grande do Sul, Brazil
João Araújo, Universidade Nova de Lisboa, Portugal
Ana Moreira, Universidade Nova de Lisboa, Portugal
Pedro Guerreiro, Universidade do Algarve, Portugal
R. Tom Price, Universidade Federal do Rio Grande do Sul, Brazil

Symmetric Encapsulated Multi-Methods to Abstract over Application Structure

David Lievens, Trinity College Dublin, Ireland
William Harrison, Trinity College Dublin, Ireland

WED. 10:30 - 12:10 AIA: S.PACIFIC BALLROOM #4

(EC) Applications of Evolutionary Computation

Session chair: Masaru Tezuka, Hitachi East Japan Solutions, Ltd., Japan

A Particle Swarm Optimization based Algorithm for Fuzzy Bilevel Decision Making with Constraints-Shared Followers

Ya Gao, University of Technology, Sydney, Australia
Guangquan Zhang, University of Technology, Sydney, Australia
Jie Lu, University of Technology, Sydney, Australia

A Gradient Oriented Recombination Scheme for Evolution Strategies

Haifeng Chen, NEC Laboratories America, Inc., United States
Guofei Jiang, NEC Laboratories America, Inc., United States

LEGAL-Tree: A Lexicographic Multi-Objective Genetic Algorithm for Decision Tree Induction

Márcio P. Basgalupp, University of São Paulo, Brazil
Rodrigo C. Barros, Pontifical Catholic University of Rio Grande do Sul, Brazil

André C.P.L.F. de Carvalho, University of São Paulo, Brazil
Alex A. Freitas, University of Kent, United Kingdom
Duncan D. Ruiz, Pontifical Catholic University of Rio Grande do Sul, Brazil

Using Artificial Life Techniques for Distributed Grid Job Scheduling

Azin Moallem, University of Saskatchewan, Canada
Simone A. Ludwig, University of Saskatchewan, Canada

Planning for Remarshaling in an Automated Container Terminal Using Cooperative Coevolutionary Algorithms

Kiyeok Park, Pusan National University, Korea
Taejin Park, Pusan National University, Korea
Kwang Ryel Ryu, Pusan National University, Korea

WED. 10:30 - 12:10

APP: HIBISCUS SUITE

(CF) Computer Forensics

Session chair: Lorie M. Liebrock, New Mexico Institute of Mining and Technology, USA

A Detecting and Tracing Algorithm for Unauthorized Internet-News Plagiarism Using Spatio-Temporal Document Evoluton Model

Chang-Keon Ryu, Pusan National University, Korea
Hyong-Jun Kim, Pusan National University, Korea
Hwan-Gue Cho, Pusan National University, Korea

Improving Classification based Off-Topic Search Detection via Category Relationships

Alana Platt, Illinois Institute of Technology, United States
Saket S.R. Mengle, Illinois Institute of Technology, United States
Nazli Goharian, Illinois Institute of Technology, United States

Incorporating Accountability into Internet Email

Wayne Liu, Florida State University, United States
Sudhir Aggarwal, Florida State University, United States
Zhenhai Duan, Florida State University, United States

Artificial Intelligence Applied to Computer Forensics

Bruno W.P. Hoelz, Brazilian Federal Police, Brazil
Célia Ghedini Ralha, Brasilia University, Brazil
Rajiv Geeverghese, Brasilia University, Brazil

12:10 - 13:30

Lunch Break

WED. 13:30 - 15:10 ENG: S.PACIFIC BALLROOM #1

(RE-1) Requirement Engineering

Session chair: Maria Lencastre, Universidade de Pernambuco, Brazil

Identifying Vulnerabilities and Critical Requirements Using Criminal Court Proceeding

Travis D. Breaux, North Carolina State University, United States
Jonathan D. Lewis, North Carolina State University, United States
Paul N. Otto, North Carolina State University / Duke University, United States

Annie I. Antón, North Carolina State University, United States

i*-prefer: Optimizing Requirements Elicitation Process based on Actor Preferences

Haihua Xie, Tsinghua University, China
Lin Liu, Tsinghua University, China
Jingwei Yang, Tsinghua University, China

Mapping Semantically Enriched Formal Tropos to Business Process Models

Ken Decreus, Ghent University, Belgium
Geert Poels, Ghent University, Belgium

Extending Problem Frames to Deal with Stakeholder Problems: An Agent- and Goal-Oriented Approach

Sam Supakkul, The University of Texas at Dallas, United States
Lawrence Chung, The University of Texas at Dallas, United States

WED. 13:30 - 15:10 IS: S.PACIFIC BALLROOM #2

(DM-2) Data Mining

Session chair: Rosa Meo, Università degli Studi di Torino, Italy

Combining Statistics and Semantics via Ensemble Model for Document Clustering

Samah Jamal Fodeh, Michigan State University, United States
William F. Punch, Michigan State University, United States
Pang-Ning Tan, Michigan State University, United States

Using Minimum Description Length for Process Mining

T. Calders, Eindhoven University of Technology, Netherlands
C.W. Günther, Eindhoven University of Technology, Netherlands
M. Pechenizkiy, Eindhoven University of Technology, Netherlands
A. Rozinat, Eindhoven University of Technology, Netherlands

Applying Latent Dirichlet Allocation to Group Discovery in Large Graphs

Keith Henderson, Lawrence Livermore National Laboratory, United States
Tina Eliassi-Rad, Lawrence Livermore National Laboratory, United States

Improved AdaBoost.M1 of Decision Trees with Confidence-Rated Predictions

Zhipeng Xie, Fudan University, China

WED. 13:30 - 15:10 SWD: S.PACIFIC BALLROOM #3

(PL-1) Programming Languages

Session chair: Bostjan Slivnik, University of Ljubljana, Slovenia

Optimizing Techniques for Saturated Arithmetic with First-Order Linear Recurrence

Weihua Zhang, Parallel Processing Institute, Fudan University, China

Lili Liu, Parallel Processing Institute, Fudan University, China
Chen Zhang, Parallel Processing Institute, Fudan University, China
Hongjiong Zhang, Parallel Processing Institute, Fudan University, China

Binyu Zang, Parallel Processing Institute, Fudan University, China
Chuanqi Zhu, Parallel Processing Institute, Fudan University, China

Algebraic Specification Techniques for Parametric Types with Logic-Based Constraints

David Briggs, University of Southern Maine, United States
Suad Alagić, University of Southern Maine, United States

Isomorphisms, Hylomorphisms and Hereditarily Finite Data Types in Haskell

Paul Tarau, University of North Texas, United States

Banzai: A Java Framework for the Implementation of High-Performance Servers

Julien Cervelle, Université Paris-Est, France
Rémi Forax, Université Paris-Est, France
Gautier Loyauté, Université Paris-Est, France
Gilles Roussel, Université Paris-Est, France

WED. 13:30 - 15:10 AIA: S.PACIFIC BALLROOM #4

(CIIA-1) Computational Intelligence and Image Analysis

Session chair: Chih-Cheng Hung, Southern Polytechnic State University, USA

Forensic Bite Mark Identification Using Image Processing Methods

Glenn Flora, Indiana University Purdue University Indianapolis, United States
Mihran Tuceryan, Indiana University Purdue University Indianapolis, United States
Herb Blitzer, Indiana Forensic Institute, United States

Super-Resolution Image Reconstruction Using the Generalized Isotropic Multi-Level Logistic Model

Ana L.D. Martins, Universidade Federal de São Carlos, Brazil
Murillo R.P. Homem, Universidade Federal de São Carlos, Brazil
Nelson D.A. Mascarenhas, Universidade Federal de São Carlos, Brazil

Heuristic Approach for Automated Shelf Space Allocation

Dario Landa-Silva, University of Nottingham, United Kingdom
Fathima Marikar, University of Nottingham, United Kingdom
Khoi Le, University of Nottingham, United Kingdom

From Exponential to Almost Linear Decomposability of Finite or Infinite Trees

Khalil Djelloul, Université d'Orléans, France

WED. 13:30 - 15:10 DS: HIBISCUS SUITE

(WT-1) Web Technologies

Session chair: Fabio Vitali, Alma Mater Studiorum - Università di Bologna, Italy

Semantic Web Services: From OWL-S via UML to MVC Applications

Cássio V.S. Prazeres, Universidade de São Paulo, Brazil
Cesar A.C. Teixeira, Universidade Federal de São Carlos, Brazil
Ethan V. Munson, University of Wisconsin-Milwaukee, United States
Maria da Graça C. Pimentel, Universidade de São Paulo, Brazil

Implementing Rigorous Web Services with Process Algebra

Mauricio Chui Rodrigues, University of São Paulo, Brazil
Simon Malkowski, CERCS, Georgia Institute of Technology, United States
João Eduardo Ferreira, University of São Paulo, Brazil
Marcos E.B. Broinizi, University of São Paulo, Brazil
Calton Pu, CERCS, Georgia Institute of Technology, United States

Towards Inference of More Realistic XSDs

Irena Mlýnková, Charles University, Czech Republic
Martin Nečaský, Charles University, Czech Republic

Discovering XML Keys and Foreign Keys in Queries

Martin Nečaský, Charles University, Czech Republic
Irena Mlýnková, Charles University, Czech Republic

An Optimistic Technique for Transactions Control Using REST Architectural Style

Luiz Alexandre Hiane da Silva Maciel, Instituto Tecnológico de Aeronáutica, Brazil
Celso Massaki Hirata, Instituto Tecnológico de Aeronáutica, Brazil

15:10 - 15:40

CORAL LOUNGE

Coffee Break

WED. 15:40 - 17:20 ENG: S.PACIFIC BALLROOM #1

(RE-2) Requirement Engineering

Session chair: Maria Lencastre, Universidade de Pernambuco, Brazil

A Method for Developing UML State Machines

Christine Choppy, LIPN - Institut Galilée - Université Paris XIII, France
Gianna Reggio, DISI - Università di Genova, Italy

Mapping UML Sequence Diagram to Time Petri Net for Requirement Validation of Embedded Real-Time Systems with Energy Constraints

Ermeson Andrade, Federal University of Pernambuco (UFPE), Brazil
Paulo Maciel, Federal University of Pernambuco (UFPE), Brazil
Gustavo Callou, Federal University of Pernambuco, Brazil
Bruno Nogueira, Federal University of Pernambuco (UFPE), Brazil
Carlos Araújo, Federal University of Pernambuco (UFPE), Brazil

LTS Semantics for use Case Models

Daniel Sinnig, Concordia University, Canada
Patrice Chalin, Concordia University, Canada
Ferhat Khendek, Concordia University, Canada

Eliciting Required Characteristics for Usable Requirements Engineering Approaches

Kristina Winbladh, University of California, Irvine, United States
Hadar Ziv, University of California, Irvine, United States
Debra J. Richardson, University of California, Irvine, United States

WED. 15:40 - 17:20 IS: S.PACIFIC BALLROOM #2

(DM-3) Data Mining

Session chair: Alessandra Raffaetà, Università Ca' Foscari, Italy

Capturing Truthiness: Mining Truth Tables in Binary Datasets

Clifford Conley Owens III, Virginia Tech, United States
T. M. Murali, Virginia Tech, United States
Naren Ramakrishnan, Virginia Tech, United States

HTILDE: Scaling Up Relational Decision Trees for Very Large Databases

Carina Lopes, Federal University of Rio de Janeiro (UFRJ), Brazil
Gerson Zaverucha, Federal University of Rio de Janeiro (UFRJ), Brazil

Automatic Discovery of Technology Trends from Patent Text

Youngho Kim, Information & Communications University, Korea
Yingshi Tian, Information & Communications University, Korea
Yoonjae Jeong, Information & Communications University, Korea
Ryu Jihee, Information & Communications University, Korea
Sung-Hyon Myaeng, Information & Communications University, Korea

WED. 15:40 - 17:20 SWD: S.PACIFIC BALLROOM #3

(PL-2) Programming Languages

Session chair: Marjan Mernik, University of Maribor, Slovenia

Troll, a Language for Specifying Dice-Rolls

Torben Ægidius Mogensen, University of Copenhagen, Denmark

A Practical Solution for Scripting Language Compilers

Paul Biggar, Trinity College Dublin, Ireland
Edsko de Vries, Trinity College Dublin, Ireland
David Gregg, Trinity College Dublin, Ireland

TWEAST: A Simple and Effective Technique to Implement Concrete-Syntax AST Rewriting Using Partial Parsing

Akim Demaille, EPITA Research & Development Laboratory (LRDE), France
Roland Levillain, EPITA Research & Development Laboratory (LRDE), France
Benoît Sigoure, EPITA Research & Development Laboratory (LRDE), France

Points-to Analysis for JavaScript

Dongseok Jang, Korea Advanced Institute of Science & Technology, Korea
Kwang-Moo Choe, Korea Advanced Institute of Science & Technology, Korea

WED. 15:40 - 17:20 AIA: S.PACIFIC BALLROOM #4

(CIA-2) Computational Intelligence and Image Analysis

Session chair: Khalil Djelloul, LIFO, Orleans, France

A New K-View Algorithm for Texture Image Classification Using Rotation-Invariant Feature

Hong Liu, Huazhong University of Science & Technology, China
Siguang Dai, Huazhong University of Science & Technology, China
Enmin Song, Huazhong University of Science & Technology, China
Cihui Yang, Huazhong University of Science & Technology, China
Chih-Cheng Hung, Southern Polytechnic State University, United States

A Method to Construct Knowledge Table-Base in k-in-a-row Games

Chang-Ming Xu, Northeastern University, China
Z.M. Ma, Northeastern University, China
Xin-he Xu, Northeastern University, China

On the Complexity of Hierarchical Associative Memories

Jana Štanclová, Charles University, Czech Republic

WED. 15:40 - 17:20

DS: HIBISCUS SUITE

(WT-2) Web Technologies

Session chair: Kay-Uwe Schmidt, SAP, Germany

Server Push with Instant Messaging

Mikko Pohja, Helsinki University of Technology, Finland

Where are your Manners? Sharing Best Community Practices in the Web 2.0

Angelo Di Iorio, Department of Computer Science - University of Bologna, Italy

Davide Rossi, Department of Computer Science - University of Bologna, Italy

Fabio Vitali, Department of Computer Science - University of Bologna, Italy

Stefano Zacchiroli, Université Paris Diderot, France

Partitioning Web Applications between the Server and the Client

Janne Kuuskeri, Tampere University of Technology, Finland
Tommi Mikkonen, Tampere University of Technology, Finland

Socially Filtered Web Search

Kay-Uwe Schmidt, SAP Research, Germany

Tobias Sarnow, SAP Research, Germany

Ljiljana Stojanovic, Forschungszentrum Informatik, Germany

Implicit Relevance Feedback for Context-Aware Information Retrieval in UbiLearning Environments

Diogo S. Martins, Universidade Federal de São Carlos, Brazil
Mauro Biajiz, Universidade Federal de São Carlos, Brazil
Antonio F. do Prado, Universidade Federal de São Carlos, Brazil
Wanderley L. de Souza, Universidade Federal de São Carlos, Brazil

WED. 18:00 - 19:00

S.PACIFIC BALLROOM #1

Track Chairs Business Meeting

WED. 19:15

POLYNESIAN CULTURAL CENTER

SAC Banquet

During the Banquet, the SAC Organization Committee will award the best papers of the conference

Thursday March 12, 2009

THU. 08:20 - 10:00 ENG: S.PACIFIC BALLROOM #1

(SE-1) Software Engineering

Session chair: Chang Oan Sung, Indiana University Southeast, USA

Modeling and Integrating Aspects with UML Activity Diagrams

Zhanqi Cui, Nanjing University, China
Linzhang Wang, Nanjing University, China
Xuandong Li, Nanjing University, China

Dianxiang Xu, North Dakota State University, United States

Towards a Compositional Approach to Model Transformation for Software Development

Soichiro Hidaka, National Institute of Informatics, Japan
Zhenjiang Hu, National Institute of Informatics, Japan
Hiroyuki Kato, National Institute of Informatics, Japan
Keisuke Nakano, The University of Electro-Communications, Japan

Model Interfaces for Two-Way Obliviousness

Nathan V. Roberts, Baylor University, United States
Eunjee Song, Baylor University, United States
Paul C. Grabow, Baylor University, United States

Key Processes to Start Software Process Improvement in Small Companies

Francisco J. Pino, University of Cauca, Colombia
Félix Garcia, University of Castilla-La Mancha, Spain
Mario Piattini, University of Castilla-La Mancha, Spain

Executing JML Specifications of Java Card Applications: A Case Study

Néstor Cataño, University of Madeira, Portugal
Tim Wahls, Dickinson College, United States

THU. 08:20 - 10:00

IS: S.PACIFIC BALLROOM #2

(WSN) Wireless Sensor Networks

Session chair: Richard Anthony, Greenwich University, UK

Sink-Oriented Dynamic Location Service for Shortest Path Relay with Energy Efficient Global Grid

Hyeonjae Jeon, Sungkyunkwan University, Korea
Kwangjin Park, Wonkwang University, Korea
Hyunseung Choo, Sungkyunkwan University, Korea

Lightweight Monitoring of Sensor Software

Mustafa Hammad, New Mexico State University, United States
Jonathan Cook, New Mexico State University, United States

Jointly Optimizing Data Acquisition and Delivery in Traffic Monitoring VANETs

Antonios Skordylis, University of Oxford, United Kingdom
Niki Trigoni, University of Oxford, United Kingdom

Real-Time Multi-View Vision Systems Using WSNs

Paolo Pagano, Scuola Superiore Sant'Anna, Italy
Francesco Piga, Scuola Superiore Sant'Anna, Pisa, Italy
Yao Liang, Indiana University Purdue University Indianapolis, United States

**Opportunistic Real-Time Routing in Multi-Hop
Wireless Sensor Networks**

Junwhan Kim, Virginia Tech, United States
Binoy Ravindran, Virginia Tech, United States

THU. 08:20 - 10:00 SWD: S.PACIFIC BALLROOM #3

**(SOAP-1) Service Oriented Architectures and
Programming**

Session chair: Claudio Guidi, Alma Mater Studiorum -
Università di Bologna, Italy

**Runtime Monitoring of Web Service
Choreographies Using Streaming XML**

Sylvain Hallé, University of California, Santa Barbara, United States
Roger Villemaire, Université du Québec à Montréal, Canada

**Load Management in Model-Aware Execution of
Composite Web Services**

Karolina Zurowska, University of Saskatchewan, Canada
Ralph Deters, University of Saskatchewan, Canada

**Using Process Mining to Business Process
Distribution**

Faramarz Safi Esfahani, Islamic Azad University, Najaf Abad
Branch, Iran
Masrah Azrifah Azmi Murad, University of Putra Malaysia,
Malaysia
Nasir Sulaiman, University of Putra Malaysia, Malaysia
Nur Izura Udzir, University of Putra Malaysia, Malaysia

**CMC-UMC: A Framework for the Verification of
Abstract Service-Oriented Properties**

Maurice H. ter Beek, ISTI-CNR, Italy
Franco Mazzanti, ISTI-CNR, Italy
Stefania Gnesi, ISTI-CNR, Italy

THU. 08:20 - 10:00 AIA: S.PACIFIC BALLROOM #4

(ROBOT-1) Intelligent Robotic Systems

Session chair: Evan Drumwright, University of Memphis, USA

**Visual Detection of Novel Terrain via Two-Class
Classification**

Christopher Brooks, Massachusetts Institute of Technology, United
States
Karl Iagnemma, Massachusetts Institute of Technology, United
States

**Attention Driven Visual Processing for an
Interactive Dialog Robot**

Thomas Müller, Technische Universität München, Germany
Alois Knoll, Technische Universität München, Germany

**Evaluation of Visual Attention Models under 2D
Similarity Transformations**

Milton Roberto Heinen, Federal University of the Rio Grande do
Sul, Brazil
Paulo Martins Engel, Federal University of the Rio Grande do Sul,
Brazil

**Evolving Morphologies and Gaits of Physically
Realistic Simulated Robots**

Milton Roberto Heinen, Federal University of the Rio Grande do
Sul, Brazil
Fernando Osorio, Universidade de São Paulo, Brazil

THU. 08:20 - 10:00

APP: HIBISCUS SUITE

(CS-1) Computational Sciences

Session chair: Adrian Sandu, Virginia Polytechnic Institute
and State University, USA

**Workflow Management for High Volume Supernova
Search**

Cecilia R. Aragon, Lawrence Berkeley National Laboratory, United
States
Karl J. Runge, Space Sciences Laboratory, United States

**Vector Stream Processing for Effective Application
of Heterogeneous Parallelism**

John C. Linford, Virginia Polytechnic Institute & State University,
United States
Adrian Sandu, Virginia Polytechnic Institute & State University,
United States

**GTfold: A Scalable Multicore Code for RNA
Secondary Structure Prediction**

Amrita Mathuriya, Georgia Institute of Technology, United States
David A. Bader, Georgia Institute of Technology, United States
Christine E. Heitsch, Georgia Institute of Technology, United States
Stephen C. Harvey, Georgia Institute of Technology, United States

**Modular Implementation of Adaptive Decisions in
Stochastic Simulations**

Pilsung Kang, Virginia Tech, United States
Yang Cao, Virginia Tech, United States
Naren Ramakrishnan, Virginia Tech, United States
Calvin J. Ribbens, Virginia Tech, United States
Srinidhi Varadarajan, Virginia Tech, United States

**Bulk based Preconditioning for Quantum Dot
Computations**

Christof Vömel, ETH Zurich, Switzerland
Stanimire Z. Tomov, University of Tennessee, Knoxville, United
States
Osni Marques, Lawrence Berkeley National Laboratory, United
States
Andrew Canning, Lawrence Berkeley National Laboratory, United
States
Jack Dongarra, University of Tennessee, United States
Julien Langou, University of Colorado at Denver, United States
Lin-Wang Wang, Lawrence Berkeley National Laboratory, United
States

10:00 - 10:30

CORAL LOUNGE

Coffee Break

THU. 10:30 - 12:10 ENG: S.PACIFIC BALLROOM #1

(SE-2) Software Engineering

Session chair: Chang Oan Sung, Indiana University Southeast,
USA

**Using Aspects and Dynamic Composition to
Provide Context-Aware Adaptation for Mobile
Applications**

Flavia C. Delicato, Federal University of Rio Grande do Norte,
Brazil
Isanio L. Araujo Santos, Federal University of Rio Grande do Norte,
Brazil
Paulo F. Pires, Federal University of Rio Grande do Norte, Brazil
Ana Liz S. Oliveira, Federal University of Rio Grande do Norte,
Brazil
Thais Batista, Federal University of Rio Grande do Norte, Brazil
Luci Pirmez, Federal University of Rio de Janeiro, Brazil

Using a Product Line for Creating Component Systems

Tomáš Bureš, Institute of Computer Science, Academy of Sciences of the Czech Republic / Charles University, Czech Republic
Petr Hnětynka, Charles University, Czech Republic
Michal Malohlava, Charles University, Czech Republic

A Comparative Study of Techniques to Write Customizable Libraries

Baris Aktemur, University of Illinois at Urbana-Champaign, United States
Sam Kamin, University of Illinois at Urbana-Champaign, United States

Applying Test-Driven Code Search to the Reuse of Auxiliary Functionality

Otávio Augusto Lazzarini Lemos, Universidade de São Paulo - Instituto de Ciências Matemáticas e de Computação, Brazil
Sushil Bajracharya, University of California, Irvine, United States
Joel Ossher, University of California, Irvine, United States
Paulo Cesar Masiero, Universidade de São Paulo - Instituto de Ciências Matemáticas e de Computação, Brazil
Cristina Lopes, University of California, Irvine, United States

Component-Based Metrics Applying the Strength of Dependency between Classes

Misook Choi, Woosuk University, Korea
Injoo J. Kim, East-West University, United States
Jiman Hong, Soongsil University, Korea
Jungyeop Kim, Utica College, United States

THU. 10:30 - 12:10 IS: S.PACIFIC BALLROOM #2

(EIS) Enterprise Information Systems

Session chair: Maria-Eugenia Iacob, University of Twente, The Netherlands

Management of Requirements in ERP Development: A Comparison between Proprietary and Open Source ERP

Björn Johansson, Copenhagen Business School, Denmark
Rogério Atem de Carvalho, Federal Center for Technological Education of Campos, Brazil

Cross-Organizational ERP Management: How to Create a Successful Business Case?

Silja Eckartz, University Twente, Netherlands
Maya Daneva, University Twente, Netherlands
Roel Wieringa, University Twente, Netherlands
Jos van Hillegersberg, University Twente, Netherlands

Model-Based Reasoning on the Achievement of Business Goals

Sebastian Höhn, Albert-Ludwig University, Germany

Policy Management Architecture Based on Provisioning Model and Authorization Certificates

Arlindo L. Marcon Jr., Pontifical Catholic University of Paraná, Brazil
Altair O. Santin, Pontifical Catholic University of Paraná, Brazil
Luiz A. de Paula Lima Jr., Pontifical Catholic University of Paraná, Brazil
Maicon Stihler, Pontifical Catholic University of Paraná, Brazil

Privacy Preserving Churn Prediction

Shuting Xu, Virginia State University, United States
Shuhua Lai, Virginia State University, United States
Manying Qiu, Virginia State University, United States

THU. 10:30 - 12:10 SWD: S.PACIFIC BALLROOM #3

(SOAP-2) Service Oriented Architectures and Programming

Session chair: Stefania Gnesi, ISTI-CNR, Italy

PRECISO: A Reengineering Process and a Tool for Database Modernisation through Web Services

Ricardo P. del Castillo, Alarcos Research Group, University of Castilla-La Mancha, Spain
Ignacio García-Rodríguez, Alarcos Research Group, University of Castilla-La Mancha, Spain
Ismael Caballero, Alarcos Research Group, University of Castilla-La Mancha, Spain
Macario Polo, Alarcos Research Group, University of Castilla-La Mancha, Spain
Mario Piattini, Alarcos Research Group, University of Castilla-La Mancha, Spain

Annotating UDDI Registries to Support the Management of Composite Services

M. Brian Blake, Georgetown University, United States
Michael F. Nowlan, Georgetown University, United States
Ajay Bansal, Georgetown University, United States
Srividya Kona, Georgetown University, United States

A General Service Oriented Approach for Managing Virtual Machines Allocation

Paolo Anedda, Center for Advanced Studies, Research & Development in Sardinia, Italy
Massimo Gaggero, Center for Advanced Studies, Research & Development in Sardinia, Italy
Simone Manca, Center for Advanced Studies, Research & Development in Sardinia, Italy
Omar Schiaratura, Center for Advanced Studies, Research & Development in Sardinia, Italy
Simone Leo, Center for Advanced Studies, Research & Development in Sardinia, Italy
Fabrizio Montesi, University of Bologna, Italy
Gianluigi Zanetti, Center for Advanced Studies, Research & Development in Sardinia, Italy

SimSOA – An Approach for Agent-Based Simulation and Design-Time Assessment of SOC-Based IT Systems

Stefan Thanheiser, Karlsruhe Institute of Technology (KIT), Institute AIFB, Germany
Lei Liu, Karlsruhe Institute of Technology (KIT), Institute AIFB, Germany
Hartmut Schmeck, Karlsruhe Institute of Technology (KIT), Institute AIFB, Germany

THU. 10:30 - 12:10 AIA: S.PACIFIC BALLROOM #4

(ROBOT-2) Intelligent Robotic Systems

Session chair: Fernando Santos Osório, University of São Paulo, Brazil

Visual Loop-Closing with Image Profiles

Hannah Hoerding, Harvey Mudd College, United States
Lesia Bilitchenko, California Polytechnic University, Pomona, United States
Zachary Dodds, Harvey Mudd College, United States

Autonomous Networked Robots for the Establishment of Wireless Communication in Uncertain Emergency Response Scenarios

Stelios Timotheou, Imperial College London, United Kingdom
Georgios Loukas, Imperial College London, United Kingdom

A Robust and Tractable Contact Model for Dynamic Robotic Simulation

Evan Drumwright, University of Memphis, United States
Dylan A. Shell, University of Southern California, United States

Sources of Error in a Rigid Body Simulation of Rigid Parts on a Vibrating Rigid Plate

Steve Berard, Rensselaer Polytechnic Institute, United States
Binh Nguyen, Rensselaer Polytechnic Institute, United States
J.C. Trinkle, Rensselaer Polytechnic Institute, United States

THU. 10:30 - 12:10

APP: HIBISCUS SUITE

(CS-2) Computational Sciences

Session chair: Yang Cao, Virginia Polytechnic Institute and State University, USA

An Efficient and Accurate Lattice for Pricing Derivatives under a Jump-Diffusion Process

Chuan-Ju Wang, National Taiwan University, Taiwan
Tian-Shyr Dai, National Chiao Tung University, Taiwan
Yuh-Dauh Lyuu, National Taiwan University, Taiwan
Yen-Chun Liu, National Chiao Tung University, Taiwan

Semi-Automatic Parallelization of Direct and Inverse Problems for Geothermal Simulation

H. Martin Bucker, RWTH Aachen University, Germany
Arno Rasch, RWTH Aachen University, Germany
Volker Rath, RWTH Aachen University, Germany
Andreas Wolf, RWTH Aachen University, Germany

Uncertainty Apportionment for Air Quality Forecast Models

Haiyan Cheng, Virginia Polytechnic Institute & State University, United States
Adrian Sandu, Virginia Polytechnic Institute & State University, United States

Interlaced Euler Scheme for Stiff Systems of Stochastic Differential Equations

Ioana Cipcigan, University of Maryland, Baltimore County, United States
Muruhan Rathinam, University of Maryland, Baltimore County, United States

Adaptive Finite Element Methods for Nonlinear Inverse Problems

Wolfgang Bangerth, Texas A & M University, United States
Amit Joshi, Baylor College of Medicine, United States

THU. 12:10 - 13:30

SEA PEARL SUITE 1-2

Track-Chairs Luncheon

Open to all track chairs

12:10 - 13:30

Lunch Break

THU. 13:30 - 15:10

ENG: S.PACIFIC BALLROOM #1

(SE-3) Software Engineering

Session chair: Chang Oan Sung, Indiana University Southeast, USA

Integration of Formal Specification, Review, and Testing for Software Component Quality Assurance

Shaoying Liu, Hosei University, Japan
Tetsuo Tamai, University of Tokyo, Japan
Shin Nakajima, National Institute of Informatics, Japan

Enhanced Lattice-Based Adaptive Random Testing

T.Y. Chen, Swinburne University of Technology, Australia
De Hao Huang, Swinburne University of Technology, Australia
F.-C. Kuo, Swinburne University of Technology, Australia
R.G. Merkel, Swinburne University of Technology, Australia
Johannes Mayer, University of Ulm, Germany

GenQA: Automated Addition of Architectural Quality Attribute Support for Java Software

Sarthak Grover, SAP, United States
Nigamanth Sridhar, Cleveland State University, United States

A Case Study of Pattern-Based Software Framework to Improve the Quality of Software Development

Chih-Hung Chang, Hsiuping Institute of Technology, Taiwan
Chih-Wei Lu, Hsiuping Institute of Technology, Taiwan
William C. Chu, Tunghai University, Taiwan
Nien-Lin Hsueh, Feng Chia University, Taiwan
Chorng-Shiuh Koong, Taichung University, Taiwan

An Empirical Study of Incorporating Cost into Test Suite Reduction and Prioritization

Adam M. Smith, University of Pittsburgh, United States
Gregory M. Kapfhammer, Allegheny College, United States

THU. 13:30 - 15:10

IS: S.PACIFIC BALLROOM #2

(IAR-1) Information Access and Retrieval

Session chair: Yoshinori Hijikata, Osaka University, Japan

Bipolar Query Satisfaction Using Satisfaction and Dissatisfaction Degrees: Bipolar Satisfaction Degrees

Tom Matthé, Ghent University, Belgium
Guy De Tré, Ghent University, Belgium

Heterogeneous Bipolar Criteria Satisfaction Handling in Geographic Decision Support Systems: An LSP based Approach

Guy De Tré, Ghent University, Belgium
Jozo J. Dujmović, San Francisco State University, United States
Nico Van de Weghe, Ghent University, Belgium
Tom Matthé, Ghent University, Belgium
Niels Charlier, Ghent University, Belgium

Alternatives to Conjunctive Query Processing in Peer-to-Peer File-Sharing Systems

Wai Gen Yee, Illinois Institute of Technology, United States
Linh Thai Nguyen, Illinois Institute of Technology, United States
Ophir Frieder, Illinois Institute of Technology, United States

Fast Error-Tolerant Search on Very Large Texts

Marjan Celikik, Max Planck Institute for Computer Science, Germany
Holger Bast, Max Planck Institute for Computer Science, Germany

A Session Based Personalized Search Using an Ontological User Profile

Mariam Daoud, IRIT, Paul Sabatier University, France
Lynda Tamine-Lechani, IRIT, Paul Sabatier University, France
Mohand Boughanem, IRIT, Paul Sabatier University, France
Bilal Chebaro, Lebanese University, Lebanon

THU. 13:30 - 15:10 SWD: S.PACIFIC BALLROOM #3

(EMBS-1) Embedded Systems

Session chair: Alessio Bechini, University of Pisa, Italy

Celling SHIM: Compiling Deterministic Concurrency to a Heterogeneous Multicore

Nalini Vasudevan, Columbia University, United States
Stephen A. Edwards, Columbia University, United States

Heterogeneous Real-Time Embedded Software Optimization Considering Hardware Platform

Meikang Qiu, University of New Orleans, United States
Hao Li, University of North Texas, United States
Edwin H.-M. Sha, University of Texas at Dallas, United States

RT-Replayer: A Record-Replay Architecture for Embedded Real-Time Software Debugging

Ji Chan Maeng, Hanyang University, Korea
Jung-Il Kwon, Hanyang University, Korea
Min-Kyu Sin, Hanyang University, Korea
Minsoo Ryu, Hanyang University, Korea

Optimal Service Level Allocation in Environmentally Powered Embedded Systems

Clemens Moser, Swiss Federal Institute of Technology (ETH), Switzerland
Jian-Jia Chen, Swiss Federal Institute of Technology (ETH), Switzerland
Lothar Thiele, Swiss Federal Institute of Technology (ETH), Switzerland

Improving Functional Verification of Embedded Systems Using Hierarchical Composition and Set Theory

Cássio L. Rodrigues, Federal University of Campina Grande, Brazil
Karina R.G. da Silva, Federal University of Goiás, Brazil
Henrique N. Cunha, Federal University of Campina Grande, Brazil
Jorge C.A. de Figueiredo, Federal University of Campina Grande, Brazil
Dalton D.S. Guerrero, Federal University of Campina Grande, Brazil
Elmar Melcher, Federal University of Campina Grande, Brazil

THU. 13:30 - 15:10 AIA: S.PACIFIC BALLROOM #4

(SWA-1) The Semantic Web and Applications

Session chair: Hoyil Han, Drexel University, USA

Improving Folksonomies Quality by Syntactic Tag Variations Grouping

Francisco Echarte, Universidad Pública de Navarra, Spain
José Javier Astrain, Universidad Pública de Navarra, Spain
Alberto Córdoba, Universidad Pública de Navarra, Spain
Jesús Villadangos, Universidad Pública de Navarra, Spain

Efficient Processing of SPARQL Joins in Memory by Dynamically Restricting Triple Patterns

Jinghua Groppe, Institute of Information Systems, University of Lübeck, Germany
Sven Groppe, Institute of Information Systems, University of Lübeck, Germany
Sebastian Ebers, Institute of Information Systems, University of Lübeck, Germany
Volker Linnemann, Institute of Information Systems, University of Lübeck, Germany

SWOBE – Embedding the Semantic Web languages RDF, SPARQL and SPARUL into Java for Guaranteeing Type Safety, for Checking the

Satisfiability of Queries and for the Determination of Query Result Types

Sven Groppe, Institute of Information Systems, University of Lübeck, Germany
Jana Neumann, Institute of Information Systems, University of Lübeck, Germany
Volker Linnemann, Institute of Information Systems, University of Lübeck, Germany

Spam Decisions on Gray E-mail Using Personalized Ontologies

Seongwook Youn, University of Southern California, United States
Dennis McLeod, University of Southern California, United States

THU. 13:30 - 15:10

DS: HIBISCUS SUITE

(MCA-1) Mobile Computing and Applications

Session chair: Natallia Kokash, CWI, The Netherlands

A Lightweight 3D Visualization and Navigation System on Handheld Devices

Wendel Silva, University of Fortaleza, Brazil
Maria Andreia Rodrigues, University of Fortaleza (UNIFOR), Brazil

Seamless Access of Home Theater Personal Computers for Mobile Devices

Lorena Maia, UFCG, Brazil
Danilo Santos, UFCG, Brazil
Ricardo Souza, UFCG, Brazil
Angelo Perkusich, UFCG, Brazil
Hyggo Almeida, UFCG, Brazil

Wireless Communication Glove Apparatus for Motion Tracking, Gesture Recognition, Data Transmission, and Reception in Extreme Environments

Marion Ceruti, Space and Naval Warfare Systems, USA
Vincent Dinh, Space and Naval Warfare Systems, USA
Nghia Tran, Space and Naval Warfare Systems, USA
Hoa Phan, Space and Naval Warfare Systems, USA
LorRaine Duffy, Space and Naval Warfare Systems, USA
Tu-Anh Ton, Space and Naval Warfare Systems, USA
Guy Leonard, Space and Naval Warfare Systems, USA
Emily Medina, Space and Naval Warfare Systems, USA
Omar Amezcua, Space and Naval Warfare Systems, USA
Sunny Fugate, Space and Naval Warfare Systems, USA
Gary Rogers, Space and Naval Warfare Systems, USA
Robert Luna, Space and Naval Warfare Systems, USA
Jeffrey Ellen, Space and Naval Warfare Systems, USA

Creating a Mobile Web Application Platform: The Lively Kernel Experiences

Tommi Mikkonen, Sun Microsystems Laboratories, Finland
Antero Taivalsaari, Sun Microsystems Laboratories, Finland

The Device Service Bus: A Solution for Embedded Device Integration through Web Services

Gustavo Araújo, Federal University of Santa Catarina, Brazil
Frank Siqueira, Federal University of Santa Catarina, Brazil

15:10 - 15:40

CORAL LOUNGE

Coffee Break

THU. 15:40 - 17:20 ENG: S.PACIFIC BALLROOM #1

(SE-4) Software Engineering

Session chair: Chang Oan Sung, Indiana University Southeast, USA

Refining Spectrum-Based Fault Localization Rankings

Rui Abreu, Delft University of Technology, Netherlands
Wolfgang Mayer, University of South Australia, Australia
Markus Stumptner, University of South Australia, Australia
Arjan J.C. van Gemund, Delft University of Technology, Netherlands

Projecting Code Changes onto Execution Traces to Support Localization of Recently Introduced Bugs

Johannes Bohnet, Hasso-Plattner-Institute at the University of Potsdam, Germany
Stefan Voigt, Hasso-Plattner-Institute at the University of Potsdam, Germany
Jürgen Doellner, Hasso-Plattner-Institute at the University of Potsdam, Germany

Searching for Relevant Software Change Artifacts Using Semantic Networks

Mikael Lindvall, Fraunhofer Center Maryland for Experimental Software Engineering, United States
Raimund L. Feldmann, Fraunhofer Center Maryland for Experimental Software Engineering, United States
George Karabatis, University of Maryland Baltimore County (UMBC), United States
Zhiyuan Chen, University of Maryland Baltimore County (UMBC), United States
Vandana P. Janeja, University of Maryland Baltimore County (UMBC), United States

Failure Management Development for Integrated Automotive Safety-Critical Software Systems

Haklin Kimm, East Stroudsburg University, United States
Sung Shin, South Dakota State University, United States
Ho-sang Ham, Electronics & Communication Research Institute, Korea
Chang Oan Sung, Indiana University Southeast, United States

Remote Software Protection by Orthogonal Client Replacement

Mariano Ceccato, Fondazione Bruno Kessler, Italy
Paolo Tonella, Fondazione Bruno Kessler, Italy
Mila Dalla Preda, University of Verona, Italy
Anirban Majumdar, University of Trento, Italy

THU. 15:40 - 17:20 IS: S.PACIFIC BALLROOM #2

(IAR-2) Information Access and Retrieval

Session chair: Guy de Tré, University of Ghent, Belgium

HITS Algorithm Improvement Using Anchor-related Text Extracted by DOM Structure Analysis

Yoshinori Hijikata, Osaka University, Japan
Bui Quang Hung, Osaka University, Japan
Masanori Otsubo, Osaka University, Japan
Shogo Nishida, Osaka University, Japan

A Sentence Level Probabilistic Model for Evolutionary Theme Pattern Mining from News Corpora

Shizhu Liu, Illinois Institute of Technology, United States
Yuval Merhav, Illinois Institute of Technology, United States
Wai Gen Yee, Illinois Institute of Technology, United States
Nazli Goharian, Illinois Institute of Technology, United States
Ophir Frieder, Illinois Institute of Technology, United States

Diverse Peer Selection in Collaborative Web Search

Le-Shin Wu, Indiana University, United States
Filippo Menczer, Indiana University, United States

A Class of Multistep Sparse Matrix Strategies for Concept Decomposition Matrix Approximation

Chi Shen, Kentucky State University, United States
Mike Unuakhalu, Kentucky State University, United States

Self-Organizing Collaborative Filtering in Global-Scale Massive Multi-User Virtual Environments

Alexander Höhfeld, University of Trier, Germany
Patrick Gratz, University of Luxembourg, Luxembourg
Angelo Beck, University of Trier, Germany
Jean Botev, University of Trier, Germany
Hermann Schloss, University of Trier, Germany
Ingo Scholtes, University of Trier, Germany

THU. 15:40 - 17:20 SWD: S.PACIFIC BALLROOM #3

(EMBS-2) Embedded Systems

Session chair: Alessio Bechini, University of Pisa, Italy

FlashBox: A System for Logging Non-Deterministic Events in Deployed Embedded Systems

Siddharth Choudhuri, University of California, Irvine, United States
Tony Givargis, University of California, Irvine, United States

Impact of NVRAM Write Cache for File System Metadata on I/O Performance in Embedded Systems

In Hwan Doh, Hongik University, Korea
Hyo J. Lee, Hongik University, Korea
Young Je Moon, Hongik University, Korea
Eunsam Kim, Hongik University, Korea
Jongmoo Choi, Dankook University, Korea
Donghee Lee, University of Seoul, Korea
Sam H. Noh, Hongik University, Korea

Storage Architecture and Software Support for SLC/MLC Combined Flash Memory

Soojun Im, Sungkyunkwan University, Korea
Dongkun Shin, Sungkyunkwan University, Korea

The Current Feasibility of Gesture Recognition for a Smartphone Using J2ME

Luís Tarrataca, Technical University of Lisbon, Portugal
André C. Santos, Technical University of Lisbon, Portugal
João M.P. Cardoso, University of Porto, Portugal

An Adaptive Block-Set based Management for Large-Scale Flash Memory

Zhanzhan Liu, University of Science & Technology of China, China
Lihua Yue, University of Science & Technology of China, China
Peng Wei, University of Science & Technology of China, China
Peiquan Jin, University of Science & Technology of China, China
Xiaoyan Xiang, University of Science & Technology of China, China

THU. 15:40 - 17:20 AIA: S.PACIFIC BALLROOM #4

(SWA-2) The Semantic Web and Applications

Session chair: Sofia J. Athenikos, Drexel University, USA

Efficient Mobile Reasoning for Pervasive Discovery

Luke Steller, Monash University, Australia
Shonali Krishnaswamy, Monash University, Australia

Applying Semantic Web Technology to Feature Modeling

Lamia Abo Zaid, Vrije Universiteit Brussel, Belgium
Frederic Kleineremann, Vrije Universiteit Brussel, Belgium
Olga De Troyer, Vrije Universiteit Brussel, Belgium

Parallel Materialization of Large ABoxes

Sivaramakrishnan Narayanan, The Ohio State University, United States
Umit Catalyurek, The Ohio State University, United States
Tahsin Kurc, Emory University, United States
Joel Saltz, Emory University, United States

Leveraging OWL for GIS Interoperability: Rewards and Pitfalls

Serge Boucher, Université Libre de Bruxelles, Belgium
Esteban Zimányi, Université Libre de Bruxelles, Belgium

THU. 15:40 - 17:20

DS: HIBISCUS SUITE

(MCA-2) Mobile Computing and Applications

Session chair: Tommi Mikkonen, Sun Microsystems

A Destination Prediction Method Using Driving Contexts and Trajectory for Car Navigation Systems

Kohei Tanaka, Osaka University, Japan
Yasue Kishino, NTT Communication Science Laboratories, Japan
Tutomu Terada, Kobe University, Japan
Shojiro Nishio, Grad. of Information Science and Technology, Osaka University, Japan

A Mobility Management Scheme using SCTP-SIP for Real-time Services across Heterogeneous Networks

Hyelim Park, Information and Communications University, Korea
Myungchul Kim, Information and Communications University, Korea
Sooyong Lee, Information and Communications University, Korea
Sungwon Kang, Information and Communications University, Korea
Yongho Kim, Korea Telecom, Korea

Mobility Aware Path Maintenance in Ad hoc Networks

Sumesh Philip, Western Illinois University, United States
Vishal Anand, SUNY College at Brockport, United States

A Passive Conformance Testing Approach for a Manet Routing Protocol

Ana Cavalli, Telecom & Management SudParis, France
Stephane Maag, Telecom & Management SudParis, France
Edgardo Montes de Oca, Montimage, France
Willy Jimenez, Telecom & Management SudParis, France

A Flexible QoS-aware Routing Protocol for Infrastructure-less B3G Networks

Natallia Kokash, CWI, Netherlands
Roberto Speicys Cardoso, INRIA, France
Pierre-Guillaume Raverdy, INRIA, France
Valerie Issarny, INRIA, France

THU. 17:20

Conference Ends

SAC 2009 Posters List

TUESDAY, 9:00 - 12:00

CORAL LOUNGE

Poster Session 1

(AOMS) Agent-Oriented Software Engineering Methodologies and Systems

Extending PASSI to Model Multi-Agent Systems Product Lines

Ingrid Nunes, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

Uirá Kulesza, Federal University of Rio Grande do Norte, Brazil
Camila Nunes, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

Elder Cirilo, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

Carlos Lucena, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

Automatic Product Derivation of Multi-Agent Systems Product Lines

Elder Cirilo, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

Ingrid Nunes, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

Uirá Kulesza, Federal University of Rio Grande do Norte, Brazil
Camila Nunes, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

Carlos Lucena, Pontifícia Universidade Católica do Rio de Janeiro, Brazil

(BIO) Bioinformatics

On a Discretizable Subclass of Instances of the Molecular Distance Geometry Problem

Carlile Lavor, State University of Campinas, Brazil

Leo Liberti, LIX, École Polytechnique, France

Antonio Mucherino, LIX, École Polytechnique, France

Nelson Maculan, Federal University of Rio de Janeiro, Brazil

Measuring Coherence between Electronic and Manual Annotations in Biological Databases

Catia Pesquita, University of Lisbon, Portugal

Daniel Faria, University of Lisbon, Portugal

Francisco M. Couto, University of Lisbon, Portugal

Rui Lopes, University of Lisbon, Portugal

Two Lower Bounds for Self-Assemblies at Temperature 1

Ján Maňuch, Simon Fraser University, Canada

Ladislav Stacho, Simon Fraser University, Canada

Christine Stoll, Simon Fraser University, Canada

(CAHC) Computer Application in Health Care

An Evaluation of Technologies for the Pseudonymization of Medical Data

Thomas Neubauer, Vienna University of Technology, Austria

Andreas Ekelhart, Secure Business Austria, Austria

Automated Device for Determination of Skin Lesion Regions

Mohammad El Habbal, American University of Beirut, Lebanon

Maya El Moghrabi, American University of Beirut, Lebanon

Omar Monajjed, American University of Beirut, Lebanon

Ayman Kayssi, American University of Beirut, Lebanon

(CF) Computer Forensics

Clustering Malware-Generated Spam Emails with a Novel Fuzzy String Matching Algorithm

Chun Wei, University of Alabama at Birmingham, United States
Alan Sprague, University of Alabama at Birmingham, United States
Gary Warner, University of Alabama at Birmingham, United States

Revealing Common Sources of Image Spam by an Unsupervised Clustering with Visual Features

Chengcui Zhang, University of Alabama at Birmingham, United States

Wei-Bang Chen, University of Alabama at Birmingham, United States

Xin Chen, University of Alabama at Birmingham, United States
Gary Warner, University of Alabama at Birmingham, United States

Reconstructing Strip-Shredded Documents Using Color as Feature Matching

Marlos A.O. Marques, Pontifical Catholic University of Parana – PUCPR, Brazil

Cinthia O.A. Freitas, Pontifical Catholic University of Parana – PUCPR, Brazil

On the Persistence of Deleted Windows Registry Data Structures

Damir Kahvedžić, University College Dublin, Ireland

Tahar Kechadi, University College Dublin, Ireland

(CIIA) Computational Intelligence and Image Analysis

An Intelligent Video System for Vehicle Localization and Tracking in Police Cars

Amirali Jazayeri, Indiana University Purdue University Indianapolis, United States

Hongyuan Cai, Indiana University Purdue University Indianapolis, United States

Jiang Yu Zheng, Indiana University Purdue University Indianapolis, United States

Mihran Tuceryan, Indiana University Purdue University Indianapolis, United States

Herbert Blitzer, Indiana Forensic Institute, United States

A New Cross-Training Approach by Using Labeled Data

Dongshan Huang, Huazhong University of Science & Technology, China

Enmin Song, Huazhong University of Science & Technology, China
Guangzhi Ma, Huazhong University of Science & Technology, China

Huirong Zhan, Huazhong University of Science & Technology, China
Chih-Cheng Hung, Southern Polytechnic State University, United States

Foreground Classification Using Active Template in the Scene Context for Visual Surveillance

Xiaoying Sha, Ocean University of China / Lotus Hill Research Institute, China

Xiaobai Liu, Huazhong University of Science & Technology / Lotus Hill Research Institute, China

Jianting Wen, Chinese Academy of Sciences, China

Liang Lin, Lotus Hill Research Institute, China

Junyu Dong, Ocean University of China, China

Shader Space Navigator: A Turbo for an Intuitive and Effective Shading Process

Jae-Ho Lee, ETRI, Korea

Min-Hee Jang, Hanyang University, Korea

Du-Yeol Kim, Hanyang University, Korea

Sang-Wook Kim, Hanyang University, Korea

Min-Ho Kim, Studio Floating Island, Korea

Jin-Sung Choi, ETRI, Korea

(CM) Coordination Models, Languages and Applications

Applying Reo to Service Coordination in Long-Running Business Transactions

Natallia Kokash, CWI, Netherlands
Farhad Arbab, CWI, Netherlands

(CN) Computer Networks

Securing Key Issuing in Peer-to-Peer Networks

Cong Tang, School of EECS, Peking University, China
Ruichuan Chen, School of EECS, Peking University, China
Zhuhua Cai, School of EECS, Peking University, China
Anmin Xie, School of EECS, Peking University, China
Jianbin Hu, School of EECS, Peking University, China
Liyong Tang, School of EECS, Peking University, China
Zhong Chen, School of EECS, Peking University, China

Analysis of the Secure RTP Protocol on Voice over Wireless Networks Using Extended MedQoS

Alexandre Passito, Federal University of Amazonas, Brazil
Edjair Mota, Federal University of Amazonas, Brazil
Edjard Mota, Federal University of Amazonas, Brazil
Edson Nascimento, Jr., Federal University of Amazonas, Brazil

Preservation of Ordering in a Network of Brokers

Cássio M.M. Pereira, Faculdades COC, Brazil
Daniel C. Lobato, Faculdades COC, Brazil
César A.C. Teixeira, Universidade Federal de São Carlos, Brazil
Maria G. Pimentel, Universidade de São Paulo, Brazil

(DADS) Dependable and Adaptive Distributed Systems

An Approach to Identifying Conversation Dependency in Service Oriented System during Dynamic Evolution

Min Liu, State Key Laboratory of Software Development Environment of Beihang University, China
Dianfu Ma, State Key Laboratory of Software Development Environment of Beihang University, China
Yongwang Zhao, State Key Laboratory of Software Development Environment of Beihang University, China

(DM) Data Mining

Mining Functional Associated Patterns From Biological Network Data

Xuequn Shang, Northwestern Polytechnical University, China
Zhanhuai Li, Northwestern Polytechnical University, China
Wei Li, Northwestern Polytechnical University, China

(DS) Data Streams

Real-Time Scheduling for Continuous Queries with Deadlines

Li Ma, Chinese Academy of Sciences/China University of Petroleum, China
Xin Li, Shandong University, China
Yongyan Wang, Chinese Academy of Sciences, China
Hongyan Wang, Chinese Academy of Sciences, China

A Method for Clustering Transient Data Streams

Pimwadee Chaovalit, University of Maryland, Baltimore County, United States
Aryya Gangopadhyay, University of Maryland, Baltimore County, United States

Incremental Outlier Detection in Data Streams Using Local Correlation Integral

Xinjie Lu, Chinese Academy of Sciences, China
Tian Yang, Chinese Academy of Sciences, China
Zaifei Liao, Chinese Academy of Sciences, China
Manzoor Elahi, Chinese Academy of Sciences, China
Wei Liu, Chinese Academy of Sciences, China
Hongyan Wang, Chinese Academy of Sciences, China

(EC) Applications of Evolutionary Computation

Daily Demand Forecasting of New Products Utilizing Diffusion Models and Genetic Algorithms

Masaru Tezuka, Hitachi East Japan Solutions, Ltd., Japan
Satoshi Munakata, Hitachi East Japan Solutions, Ltd., Japan

(EIS) Enterprise Information Systems

Constructing Process Views for Service Outsourcing

Rik Eshuis, Eindhoven University of Technology, Netherlands
Alex Nortä, University of Helsinki, Finland

Web Services in the Dutch Healthcare Insurance Sector: Expected Versus Achieved Benefits

Hayley Bakker, University of Twente, Netherlands
Maria E. Iacob, University of Twente, Netherlands

(GCR) Geometric Constraints and Reasoning

The Unique Solution for P3P Problem

Jianliang Tang, College of Mathematics & Computing Science, Shenzhen University, China
Nengzeng Liu, College of Mathematics & Computing Science, Shenzhen University, China

Topology Determination and Isolation for Implicit Plane Curves

Jin-San Cheng, Chinese Academy of Sciences, China
Xiao-Shan Gao, Chinese Academy of Sciences, China
Jia Li, Chinese Academy of Sciences, China

Multivariate Root Finding with Search Space Decomposition and Randomisation

Markus Färber, Technische Universität Ilmenau, Germany
Beat Brüderlin, Technische Universität Ilmenau, Germany

(HCI) Human-Computer Interaction

Formalizing Motivational Patterns based on Colors and Their Cultural Meanings for Developing Web Applications

Ana Luiza Dias, Universidade Federal de São Carlos, Brazil
Junia C. Anacleto, Universidade Federal de São Carlos, Brazil
Luciana M. Silveira, Universidade Tecnológica do Paraná, Brazil
Rosângela Ap. D. Penteado, Universidade Federal de São Carlos, Brazil

Design and Implementation on a Pie Menu Interface for Analog Joysticks

Masakatsu Miyamoto, Kobe University, Japan
Tsutomu Terada, Kobe University, Japan
Masahiko Tsukamoto, Kobe University, Japan

Development of a Biosignals Framework for Usability Analysis

Inês Oliveira, CICANT, Universidade Lusófona, Portugal
Rui Lopes, LaSIGE/University of Lisbon, Portugal
Nuno M. Guimarães, LaSIGE/University of Lisbon, Portugal

MATRACA: A Tool to Provide Support for People with Impaired Vision when Using the Computer for Simple Tasks

Francisco Gomes de Oliveira Neto, Federal University of Campina Grande, Brazil

Joseana Macêdo Fechine, Federal University of Campina Grande, Brazil

Roberta Ribeiro G. Pereira, Federal University of Campina Grande, Brazil

Paloma F. de Queiroz e Silva, Federal University of Campina Grande, Brazil

Michelly Guedes de Oliveira, Federal University of Campina Grande, Brazil

José Eustáquio R. Queiroz, Federal University of Campina Grande, Brazil

(IAR) Information Access and Retrieval

Stratified Division Queries Involving Ordinal User Preferences

P. Bosc, Irista/Enssat - University of Rennes 1, France
O. Pivert, Irista/Enssat - University of Rennes 1, France
O. Soufflet, Irista/Enssat - University of Rennes 1, France

Music Retrieval based on a Multi-Samples Selection Strategy for Support Vector Machine Active Learning

Tian-jiang Wang, Huazhong University of Science & Technology, China

Gang Chen, Huazhong University of Science & Technology, China
Perfecto Herrera, Universitat Pompeu Fabra, Spain

A Light-Weight Summarizer based on Language Model with Relative Entropy

Chandan Kumar, International Institute of Information Technology, India

Prasad Pingali, International Institute of Information Technology, India

Vasudeva Varma, International Institute of Information Technology, India

Improved Spam Filtering by Extraction of Information from Text Embedded Image E-mail

Seongwook Youn, University of Southern California, United States
Dennis McLeod, University of Southern California, United States

(SOAP) Service Oriented Architectures and Programming

Assessing Complexity of Service-Oriented Computing Using Learning Classifier Systems

Lei Liu, Karlsruhe Institute of Technology (KIT), Institute AIFB, Germany

Stefan Thanheiser, Karlsruhe Institute of Technology (KIT), Institute AIFB, Germany

Hartmut Schmeck, Karlsruhe Institute of Technology (KIT), Institute AIFB, Germany

(SWA) The Semantic Web and Applications

Semantic Information and Sensor Networks

Krishnaprasad Thirunaryan, Wright State University, United States
Joshua Pschorr, Wright State University, United States

SemanticQA: Web-Based Ontology-Driven Question Answering

Samir Tartir, University of Georgia, United States
Bobby McKnight, University of Georgia, United States
I. Budak Arpniar, University of Georgia, United States

TUESDAY, 14:00 - 17:00

CORAL LOUNGE

Poster Session 2

(CS) Computational Sciences

An Algorithm for Optimal Comma Free Codes with Isomorphism Rejection

Hao Wang, Michigan Technological University, United States
Vladimir D. Tonchev, Michigan Technological University, United States

Reduced Parallel PNN Algorithm for PC Grid Systems

Akiyoshi Wakatani, Konan University, Japan
Takuya Koezuka, Konan University, Japan

Exhaustion Dominated Performance – A First Attempt

Nima Namaki, University West, Sweden
Andreas de Blanche, University West, Sweden
Stefan Mankefors-Christiernin, University West, Sweden

(CSP) Constraint Solving and Programming

An Approximate Approach to Constraint Solving in Soft Sensing

Tian Yang, Chinese Academy of Sciences, China
Zaifei Liao, Chinese Academy of Sciences, China
Xinjie Lu, Chinese Academy of Sciences, China
Hongang Wang, Chinese Academy of Sciences, China

The Sum-of-Increments Constraint in the Consecutive-Ones Matrix Decomposition Problem

Sebastian Brand, University of Melbourne, Australia

(DTTA) Data Theory, Technology, and Applications

Consistent and Decentralized Orchestration of BPEL Processes

Weihai Yu, University of Tromsø, Norway

Building an Efficient Preference XML Query Processor

SungRan Cho, University of Hannover, Germany
Wolf-Tilo Balke, University of Hannover, Germany

(EMBS) Embedded Systems

Method for Fast Compression of Program Codes for Remote Updates in Embedded Systems

Ryozo Kiyohara, Mitsubishi Electric Corporation, Japan
Satoshi Mii, Mitsubishi Electric Corporation, Japan
Mitsuhiro Matsumoto, Osaka University, Japan
Masayuki Numao, Osaka University, Japan
Satoshi Kurihara, Osaka University, Japan

On Scheduling Soft Real-Time Tasks with Lock-Free Synchronization for Embedded Devices

Shouwen Lai, Virginia Tech, United States
Binoy Ravindran, Virginia Tech, United States
Hyeonjoong Cho, ETRI, Korea

ERIKA and OpenZB: An Implementation for Real-Time Wireless Networking

Paolo Pagano, Scuola Superiore Sant'Anna, Italy
Mangesh Chitnis, Scuola Superiore Sant'Anna, Italy
Antonio Romano, Scuola Superiore Sant'Anna, Italy
Giuseppe Lipari, Scuola Superiore Sant'Anna, Italy
Ricardo Severino, Polytechnic Institute of Porto, Portugal
Mário Alves, Polytechnic Institute of Porto, Portugal
Paulo G. Sousa, Polytechnic Institute of Porto, Portugal
Eduardo Tovar, Polytechnic Institute of Porto, Portugal

(MCA) Mobile Computing and Applications

High-Level Specification of a Middleware Framework for Mobile Ad Hoc Networks – Spontaneousware Case

Vando de Freitas Batista, Federal University of Pernambuco, Brazil
Nelson Souto Rosa, Federal University of Pernambuco, Brazil

Scene Map on Wireless Mobile Platform

Jiang Yu Zheng, Indiana University Purdue University Indianapolis, United States

Towards a Landmark Influence Framework to Protect Location Privacy

Mehrab Monjur, Marquette University, United States
Sheikh I. Ahamed, Marquette University, United States

(MMV) Multimedia and Visualization

Efficient Concept Detection by Fusing Simple Visual Features

Duy-Dinh Le, National Institute of Informatics, Japan
Shin'ichi Satoh, National Institute of Informatics, Japan

Visualization of Information Flows in a Very Large Social Network

Shin-gyu Kim, Seoul National University, Korea
Hyuck Han, Seoul National University, Korea
Kyunggho Jeon, Seoul National University, Korea
Hyungsoo Jung, Seoul National University, Korea
Heon Y. Yeom, Seoul National University, Korea

Two-Dimensional Non-Photorealistic Drawings on Mobile Devices

Damon Shing-Min Liu, National Chung Cheng University, Taiwan
Chi-Hsien Liu, National Chung Cheng University, Taiwan
Ching-I Cheng, National Chung Cheng University, Taiwan

Fast Mode Decision for Scalable Video Coding based on Neighboring Macroblock Analysis

Gyeonggeun Goh, Pusan National University, Korea
Jinmi Kang, Pusan National University, Korea
Misook Cho, Pusan National University, Korea
Kidong Chung, Pusan National University, Korea

A Framework for Text Visualization Using Memory Traffic Management for Mobile Devices

João Bosco Ferreira Filho, Universidade Federal do Ceará, Brazil
José de S.R. Neto, Universidade Federal do Ceará, Brazil
Cláudio R.F. Lima, Universidade Federal do Ceará, Brazil
Rossana M.C. Andrade, Universidade Federal do Ceará, Brazil

(OE) Organizational Engineering

Structuring a Process Management Center of Excellence

Rafael Paim, Federal Center for Technological Education Celso Suckow da Fonseca, Brazil
Vanessa Nunes, NP2Tec/Federal University of the State of Rio de Janeiro (UNIRIO), Brazil
Bruno Pinho, GEOS, Brazil
Flavia Santoro, NP2Tec, Brazil
Claudia Cappelli, NP2Tec, Brazil
Fernanda Araujo Baião, NP2Tec, Brazil

Constraint-Based Modelling and Analysis of Organisations

Viara Popova, De Montfort University, United Kingdom
Alexei Sharpanskykh, Vrije Universiteit Amsterdam, Netherlands

Architecture-Driven Requirements Engineering

Wilco Engelsman, BiZZdesign, Netherlands
Maria E. Iacob, University of Twente, Netherlands
Henry M. Franken, BiZZdesign, Netherlands

(OS) Operating Systems

Arbiter-Recall: A New Function Update Scheme by Arbitration between a Remote Call and a Dynamic Update for Wireless Sensor Networks

Sangho Yi, Seoul National University, Korea
Hong Min, Seoul National University, Korea
Yookun Cho, Seoul National University, Korea
Yeongkwun Kim, Western Illinois University, United States
Injoo Jeong, East West University, United States
Hyung Bae Park, University of Missouri at Kansas City, United States
Sun-Ae Shin, University of Missouri at Kansas City, United States

RPP: Reference Pattern based Prefetching Controller

Hyo J. Lee, Hongik University, Korea
In Hwan Doh, Hongik University, Korea
Sam H. Noh, Hongik University, Korea

A Practical Evaluation of Large-Memory Data Processing on a Reliable Remote Memory System

Hyungsoo Jung, Seoul National University, Korea
Hyuck Han, Seoul National University, Korea
Shin-gyu Kim, Seoul National University, Korea
Heon Y. Yeom, Seoul National University, Korea

(PL) Programming Languages

Data Parallel Dialect of Scheme

Petr Krajca, SUNY Binghamton, United States
Vilem Vychodil, SUNY Binghamton, United States

Kenro: A Virtual Machine Monitor Mostly Described in Haskell

Yoshihiro Oyama, The University of Electro-Communications, Japan
Yoshiki Kaneko, The University of Electro-Communications, Japan
Hideya Iwasaki, The University of Electro-Communications, Japan

(RE) Requirement Engineering

Early Phase Requirements Assessment of a Teletreatment Trial

I. Widya, University of Twente, Netherlands
B.J.F. van Beijnum, University of Twente, Netherlands
R. Bults, University of Twente, Netherlands
V. Jones, University of Twente, Netherlands
H. Hermens, University of Twente, Netherlands
L. Sandsjö, University of Gothenburg, Sweden
L. Schaake, Roessingh Research & Development, Netherlands
M.H.A. Huis in 't Veld, Roessingh Research & Development, Netherlands

Architectural Requirements Prioritization and Analysis Applied to Software Technology Evaluation

Karen Smiley, ABB Corporate Research, United States
Qingfeng He, ABB Corporate Research, United States
Elizabeth Kielczewski, ABB Corporate Research, United States
Aldo Dagnino, ABB Corporate Research, United States

A Systematic Method for Generating Quality Requirements Spectrum

Shunichi Suzuki, Shinshu University, Japan
Tomonori Sato, Shinshu University, Japan
Masaaki Tanigawa, Shinshu University, Japan
Akira Osada, Shinshu University, Japan
Haruhiko Kaiya, Shinshu University, Japan
Kenji Kaijiri, Shinshu University, Japan

Requirements Modelling and Evaluation for Digital Preservation: A COTS Selection Method based on Controlled Experimentation

Christoph Becker, Vienna University of Technology, Austria
Andreas Rauber, Vienna University of Technology, Austria

(ROBOT) Intelligent Robotic Systems

A Nonlinear Mobile Robot Modeling Applied to a Model Predictive Controller

André Scolari Conceição, Federal University of Ouro Preto, Brazil
A. Paulo Moreira, University of Porto, Portugal
Paulo Costa, University of Porto, Portugal

Visual Navigation: Image Profiles for Odometry and Control

Devin Smith, Harvey Mudd College, United States
Zachary Dodds, Harvey Mudd College, United States

(RTS) Real-Time Systems

Designing Reliable Real-Time Concurrent Object-Oriented Software Systems

Alfredo Capozucca, LASSY-University of Luxembourg, Luxembourg
Nicolas Guelfi, LASSY-University of Luxembourg, Luxembourg

Designing a Multi-Core Hard Real-Time Test Bed for Energy Measurement Experiments

Tongquan Wei, Michigan Tech University, United States
Xiaodao Chen, Michigan Tech University, United States
Piyush Mishra, Michigan Tech University, United States

(SE) Software Engineering

A Consumer/Producer Approach to Risk-Driven Software Reliability and Testing

Norman Schneidewind, Naval Postgraduate School, United States
Mike Hinchey, Lero-the Irish Software Engineering Research Centre, Ireland

Designing a Distributed AOP Runtime Composition Model

Ruben Mondejar, Universitat Rovira i Virgili, Spain
Pedro Garcia, Universitat Rovira i Virgili, Spain
Carles Pairot, Universitat Rovira i Virgili, Spain
Pascal Urso, Nancy-Université, INRIA, France
Pascal Molli, Nancy-Université, INRIA, France

An Approach to Detection of UML-Based Ownership Violation

Hector Miguel Chavez, Western Michigan University, United States
Wuwei Shen, Western Michigan University, United States
Shaoying Liu, Hosei University, Japan

An Extensible Source-Level Debugger

Ziad Al-Sharif, University of Idaho, United States
Clinton Jeffery, University of Idaho, United States

A Property-Based Verification Approach in Aspect-Oriented Modeling

Eunjee Song, Baylor University, United States
Hanil Kim, Cheju National University, Korea
Wuliang Sun, Baylor University, United States

The Visual Authoring Tool of Flash-Based Component for Interactive Item Template

Chong-Shiuh Koong, National Taichung University, Taiwan
Ching-Meng Lee, National Chiao Tung University, Taiwan
Deng-Jyi Chen, National Chiao Tung University, Taiwan
Chih-Hung Chang, Hsiuping Institute of Technology, Taiwan
Chihhsiong Shih, Tunghai University, Taiwan

Abstraction of Multiple Executions of Object-Oriented Programs

Chunying Zhao, University of Texas at Dallas, United States
Kang Zhang, University of Texas at Dallas, United States
Yu Lei, University of Texas at Dallas, United States

(SIM) Advances in Computer Simulation

Simulating Business Processes with EPML-Sim

Davide Rossi, University of Bologna, Italy
Elisa Turrini, University of Bologna, Italy
Fabio Vitali, University of Bologna, Italy

Using Probabilistic Model Checking and Simulation for Designing Self-Organizing Systems

Matteo Casadei, Università di Bologna, Italy
Mirko Viroli, Università di Bologna, Italy

Conceptualization and Implementation of a Microscopic Pedestrian Simulation Platform

Edgar F. Esteves, LIACC-FEUP, Portugal
Rosaldo J.F. Rossetti, LIACC-FEUP, Portugal
Paulo A.F. Ferreira, LIACC-FEUP, Portugal
Eugénio C. Oliveira, LIACC-FEUP, Portugal

Precise Generalized Contact Point and Normal Determination for Rigid Body Simulation

Dylan A. Shell, University of Southern California, United States
Evan Drumwright, University of Memphis, United States

(SOPDS) Self-Organization in Pervasive Distributed Systems

A Real Time Financial System based on Grid and Cloud Computing

Francesco Maria Aymerich, University of Cagliari, Italy
Gianni Fenu, University of Cagliari, Italy
Simone Surcis, Cosmolab Consortium, Italy

A Biochemical Metaphor for Developing Eternally Adaptive Service Ecosystems

Mirko Viroli, Università di Bologna, Italy
Matteo Casadei, Università di Bologna, Italy
Sara Montagna, Università di Bologna, Italy
Franco Zambonelli, Università di Modena e Reggio Emilia, Italy

Decentralized Coordination of Homogeneous and Heterogeneous Agents by Digital Infochemicals

Holger Kasinger, University of Augsburg, Germany
Jörg Denzinger, University of Calgary, Canada
Bernhard Bauer, University of Augsburg, Germany

(TRECK) Trust, Reputation, Evidence and other Collaboration Know-how

Modeling and Analyzing Review Information on the Web Focusing on Credibility

Takuya Kobayashi, Kyoto University, Japan
Hiroaki Ohshima, Kyoto University, Japan
Satoshi Oyama, Kyoto University, Japan
Katsumi Tanaka, Kyoto University, Japan

(WSN) Wireless Sensor Networks

Integrating Standardized Transaction Protocols in Service-Oriented Wireless Sensor Networks

Christoph Reinke, Institute of Information Systems, University of Lübeck, Germany
Nils Hoeller, Institute of Information Systems, University of Lübeck, Germany
Jana Neumann, Institute of Information Systems, University of Lübeck, Germany
Sven Groppe, Institute of Information Systems, University of Lübeck, Germany
Volker Linnemann, Institute of Information Systems, University of Lübeck, Germany
Martin Lipphardt, Institute of Telematics, University of Lübeck, Germany

Towards Developing a Trust based Security Solution

Sheikh I. Ahamed, Marquette University, United States
Donghyun Kim, Marquette University, United States
Chowdhury S. Hasan, Marquette University, United States
Mohammad Zulkernine, Queen's University, Canada

(WT) Web Technologies

Designing of a System Model for Web 3D Disabled Access GIS on Web 2.0

Shinobu Izumi, Kyushu Institute of Technology, Japan
Toshihiro Uchibayashi, Kyushu Sangyo University, Japan
Takaichi Yoshida, Kyushu Institute of Technology, Japan

Identifying Discourse Mistakes in Web Debates: Moderation in the DCC

Cristiano Maciel, Universidade Federal do Mato Grosso, Brazil
Pereira Vinicius Carvalho, UFRJ, Brazil
Roque Licinio, UC, Portugal
Bicharra Garcia Ana Cristina, UFF, Brazil

WebFlowAH: An Environment for Ad-Hoc Specification and Execution of Web Services-Based Processes

Reginaldo Mendes, Federal University of Rio Grande do Norte, Brazil
Paulo F. Pires, Federal University of Rio Grande do Norte, Brazil
Flavia Delicato, Federal University of Rio Grande do Norte, Brazil
Thais Batista, Federal University of Rio Grande do Norte, Brazil

An Approach for Semantic Web Services Automatic Discovery and Composition with Similarity Metrics

Ivo Calado, Federal University of Campina Grande, Brazil
Heitor Barros, Federal University of Alagoas, Brazil
Ig Ibert Bittencourt, Federal University of Campina Grande & Federal University of Alagoas, Brazil
Evandro Costa, Federal University of Alagoas, Brazil
Elvys Soares, Federal University of Alagoas, Brazil
Marlos Silva, Federal University of Alagoas, Brazil
Marcelo Arruda, Federal University of Alagoas, Brazil
Társis Toledo, Federal University of Alagoas, Brazil

SAC 2010 Invitation

SAC 2010 will be held in Crans-Montana/Sierre, Switzerland, from March 21st to March 26th, 2010. It is hosted by the University of Applied Sciences Western Switzerland (HES-SO) Sierre, and Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. Please check the registration desk for handouts. You can also visit the website at <http://www.acm.org/conferences/sac/sac2010/>.

We hence invite you to submit track proposals and technical papers, helping us in making SAC 2010 a very successful conference.