The 12th IEEE International Conference on Computational Science and Engineering (CSE-09)

The 7th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC-09)

The 2009 IEEE International Conference on Privacy, Security, Risk and Trust (PASSAT-09)

The 2009 IEEE International Conference on Social Computing (SocialCom-09)

Organized by St. Francis Xavier University, Canada

Sponsored by IEEE and IEEE Computer Society
IEEE Technical Committee of Scalable Computing (TCSC)
IEEE Canada Atlantic Section Computational Intelligence Chapter

Supported by Research In Motion (RIM), Canada
University of British Columbia, Canada
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# PROGRAM OF CSE-09/EUC-09/PASSAT-09/SOCIALCOM-09 AT A GLANCE

## August 28 (Friday)

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<tbody>
<tr>
<td>14:00-20:00</td>
<td>Registration (Renaissance Vancouver Hotel Harbourside)</td>
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## August 29 (Saturday)

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<th>Time</th>
<th>Event</th>
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<tr>
<td>08:00-08:15</td>
<td>Opening Remarks (Harbourside Ballroom I&amp;II)</td>
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<tr>
<td>08:15-09:00</td>
<td><strong>Keynote 1: Privacy, Security, Risk and Trust in Service-Oriented Environments</strong> by Stephen S. Yau (Harbourside Ballroom I&amp;II )</td>
</tr>
<tr>
<td>09:00-10:15</td>
<td>CSE-09 (Vancouver) Session A11, EUC-09 (New York) Session B11, EPS-09 (Hong Kong) Session B21, Keynote 8 (San Francisco) by Jie Wu, CSE-09 (Shanghai) Session A14, PASSAT-09 (Singapore) Session C11, SocialCom-09 (Ballroom III) Session D11, SNMABA-09 (Macau) Session D42, SCA-09 (Sydney) Session D31, Keynote 9 (Hastings) by Marco D. Santambrogio</td>
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<tr>
<td>10:15-10:30</td>
<td>Coffee/Tea Break (Harbourside Foyer, 2nd Floor)</td>
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<tr>
<td>10:30-12:10</td>
<td>CSE-09 (Vancouver) Session A1C, EUC-09 (New York) Session B16, EPS-09 (Hong Kong) Session B22, TrustCom-09 (San Francisco) Session B41, CSE-09 (Shanghai) Session A1A, PASSAT-09 (Singapore) Session C12, SocialCom-09 (Ballroom III) Session D12, SNMABA-09 (Macau) Session D41, SCA-09 (Sydney) Session D32, WoRMES-09 (Hastings) Session B61</td>
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<tr>
<td>12:10-13:00</td>
<td>Lunch (Harbourside Ballroom I&amp;II, 2nd floor)</td>
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<td>13:00-14:00</td>
<td><strong>Keynote 2: Elections with Practical Privacy and Transparent Integrity</strong> by David Chaum (Harbourside Ballroom I&amp;II )</td>
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<tr>
<td>14:00-15:15</td>
<td>CSE-09 (Vancouver) Session A13, EUC-09 (New York) Session B15, EPS-09 (Hong Kong) Session B23, TrustCom-09 (San Francisco) Session B41, CSE-09 (Shanghai) Session A19, PASSAT-09 (Singapore) Session C13, SocialCom-09 (Ballroom III) Session D13, SNMABA-09 (Macau) Session D43, SCA-09 (Sydney) Session D33, UUWSN-09 (Hastings) Session B81</td>
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<td>15:15-15:30</td>
<td>Coffee/Tea Break (Ballroom Foyer East, 2nd Floor)</td>
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<td>15:30-17:00</td>
<td>CSE-09 (Vancouver) Session A16, EUC-09 (New York) Session B1C, EPS-09 (Hong Kong) Session B25, TrustCom-09 (San Francisco) Session B25, SecureCom-09 (Shanghai) Session C23, PASSAT-09 (Singapore) Session C14, SocialCom-09 (Ballroom III) Session D14, SIN-09 (Macau) Session D21, SCA-09 (Sydney) Session D34, 2CCom-09 (Hastings) Session B31</td>
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<td>17:00-19:30</td>
<td>EPS-09 (Hong Kong) Session B24, TrustCom-09 (San Francisco) Session B43, SEC-09 (Shanghai) Session A23, SBM-09 (Singapore) Session D51&amp;D52, SIN-09 (Macau) Session D23, SCA-09 (Sydney) Session D35</td>
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<td>19:30-21:30</td>
<td>Reception (Vistas, 19th floor)</td>
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<td>08:00-09:00</td>
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<td>Keynote 3: Cache-Aware Scheduling and Analysis for Multicores by Wang Yi (Harbourside Ballroom I&amp;II)</td>
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<tr>
<td>09:00-10:15</td>
<td>CSE-09 (Vancouver) Session A17</td>
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<td>EUC-09 (New York) Session B17</td>
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<td>EPS-09 (Hong Kong) Session B27</td>
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<td>TrustCom-09 (San Francisco) Session B27</td>
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<td>SecureCom-09 (Shanghai) Session C21</td>
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<td></td>
<td>SP4SPNA-09 (Singapore) Session DA1</td>
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<td></td>
<td>SocialCom-09 (Ballroom III) Session D15</td>
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<td>SIN-09 (Macau) Session D26</td>
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<td>SCA-09 (Sydney) Session D39</td>
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<td>SMW-09 (Hastings) Session D91</td>
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<td>SCMPS-09 (Ballroom I) Session D71</td>
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<td>SecureCom-09 (Ballroom II) Session C24</td>
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<td>10:15-10:30</td>
<td>Coffee/Tea Break (Harbourside Foyer, 2nd Floor)</td>
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<td>10:30-12:10</td>
<td>CSE-09 (Vancouver) Session A18</td>
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<td>EUC-09 (New York) Session B1A</td>
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<td>EPS-09 (Hong Kong) Session B26</td>
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<td>TrustCom-09 (San Francisco) Session B26</td>
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<td>SCA-09 (Sydney) Session D37</td>
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<td>SCMPS-09 (Ballroom I) Session D72</td>
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<td>SecureCom-09 (Ballroom II) Session C26</td>
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<td>12:10-13:00</td>
<td>Lunch (Harbourside Ballroom I&amp;II, 2nd floor)</td>
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<tr>
<td>13:00-14:15</td>
<td>Keynote 4: Network Analysis and Visualization for Understanding Social Computing by Ben Shneiderman (Harbourside Ballroom I&amp;II)</td>
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<td>Keynote 5: Social Computing Applications and Trends by Feiye Wang (Harbourside Ballroom I&amp;II)</td>
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<td>14:15-15:15</td>
<td>Panel for EUC-09: Vision and Challenges for Embedded and Ubiquitous Computing (New York)</td>
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<td>Panel for SocialCom-09: Promoting National Initiatives for Social Networking: Research Agendas for Computing and Information Scientists (Ballroom III)</td>
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<td>15:15-15:30</td>
<td>Coffee/Tea Break (Ballroom Foyer East, 2nd Floor)</td>
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<td>15:30-17:00</td>
<td>CSE-09 (Vancouver) Session A1B</td>
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<td>EUC-09 (New York) Session B1B</td>
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<td>SP4SPNA-09 (Singapore) Session DA3</td>
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<td>SCMPS-09 (Ballroom I) Session D73</td>
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<td>SecureCom-09 (Ballroom II) Session C27</td>
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<td>17:00-19:30</td>
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<td>UbiHealth-09 (Shanghai) Session BA1</td>
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<td>SP4SPNA-09 (Singapore) Session DA4</td>
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<td>SMW-09 (Hastings) Session D94</td>
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<td>19:30-21:30</td>
<td>Banquet (Harbourside Ballroom, 2nd floor)</td>
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<tr>
<td>08:00-09:00</td>
<td>Keynote 6: White Space Networking - Is it Wi-Fi on Steroids? by Prof. Victor Bahl (Harbourside Ballroom I&amp;II)</td>
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<td>09:00-10:15</td>
<td>CSE-09 (Vancouver) Session A15, EUC-09 (New York) Session B13, SPOSN-09 (Hong Kong) Session D81, TrustCom-09 (San Francisco) Session B46, PSA-09 (Shanghai) Session C31, SSP-09 (Singapore) Session C42, SIN-09 (Ballroom III) Session D29, SIN09 (Macau) Session D2B, WSCE-09 (Sydney) Session D62, PMSN-09 (Hastings) Session B71, SIAG-09 (Ballroom I) Session DB1</td>
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<tr>
<td>10:15-10:30</td>
<td>Coffee/Tea Break (Harbourside Foyer, 2nd Floor)</td>
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<td>10:30-12:10</td>
<td>SEC-09 (Vancouver) Session A21, EUC-09 (New York) Session B12, SPOSN-09 (Hong Kong) Session D82, TrustCom-09 (San Francisco) Session B46, PSA-09 (Shanghai) Session C34, SSP-09 (Singapore) Session C41, SIN-09 (Ballroom III) Session D25, SIN-09 (Macau) Session D27, WSCE-09 (Sydney) Session D61, PMSN-09 (Hastings) Session B72, SIAG-09 (Ballroom I) Session DB2</td>
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<tr>
<td>12:10-13:00</td>
<td>Lunch (Harbourside Ballroom I&amp;II, 2nd floor)</td>
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<tr>
<td>13:00-14:00</td>
<td>Keynote 7: Computational Science and Engineering in Emerging Cyber-Ecosystems by Prof. Manish Parashar (Harbourside Ballroom I&amp;II)</td>
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<td>14:00-15:15</td>
<td>SEC-09 (Vancouver) Session A22, EUC-09 (New York) Session B19, SPOSN-09 (Hong Kong) Session D83, AWSN-09 (San Francisco) Session B51, PSA-09 (Shanghai) Session C33, SSP-09 (Singapore) Session C43, SEC-09 (Ballroom III) Session A27, SEC-09 (Ballroom III) Session D28, WSCE-09 (Sydney) Session D63, UNC-09 (Hastings) Session B91&amp;B92, SIAG-09 (Ballroom I) Session DB3</td>
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<tr>
<td>15:15-15:30</td>
<td>Coffee/Tea Break (Ballroom Foyer East, 2nd Floor)</td>
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<tr>
<td>15:30-18:30</td>
<td>SEC-09 (Vancouver) Session A25, EUC-09 (New York) Session B14, SEC-09 (Hong Kong) Session A26, AWSN-09 (San Francisco) Session B51, PSA-09 (Shanghai) Session C32, SSP-09 (Singapore) Session C44, SEC-09 (Ballroom III) Session A24, SEC-09 (Ballroom III) Session D28, SIN-09 (Macau) Session D28, WSCE-09 (Sydney) Session D63, UNC-09 (Hastings) Session B93&amp;B94, SIAG-09 (Ballroom I) Session DB4</td>
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Keynote: Privacy, Security, Risk and Trust in Service-Oriented Environments

Prof. Stephen S. Yau, Arizona State University, USA

About the keynote speaker

Stephen S. Yau is the director of Information Assurance Center and a professor of computer science and engineering at Arizona State University (ASU), Tempe, Arizona, USA. He served as the chair of the Department of Computer Science and Engineering at ASU in 1994-2001. Previously, he was on the faculties of Northwestern University, Evanston, Illinois, and University of Florida, Gainesville.


His current research includes service-based systems, trustworthy computing, software engineering, mobile ad hoc networks and ubiquitous computing. He has received many awards and recognition for his accomplishments, including the Tsutomu Kanai Award and Richard E. Merwin Award of the IEEE Computer Society, the IEEE Centennial Awards and Third Millennium Medal, the Outstanding Contributions Award of the Chinese Computer Federation, and the Louis E. Levy Medal of the Franklin Institute. He is a Life Fellow of the IEEE and a Fellow of the American Association for the Advancement of Science.

He received the M.S. and Ph.D. degrees from the University of Illinois, Urbana, and the B.S. degree from National Taiwan University, Taipei, all in electrical engineering.

Summary:

Service-Oriented Architecture (SOA) has been adopted in many critical information systems in many application domains, such as health care, scientific research, e-business, and homeland security. While SOA has many advantages, such as rapid composition, deployment, and dynamic adaptation of service-based systems, many issues on security, privacy, risk, and trust in service-oriented environments need to be resolved in order to achieve trustworthy information systems.

In this address, the privacy, security, risk, and trust and their relationship in service-oriented environments will be discussed. The challenging issues and the current state of the art of addressing these issues will be presented. Future directions of research in this area will also be discussed.
Keynote: *Elections with Practical Privacy and Transparent Integrity*

Dr. David Chaum, Board of Directors of DigiCash Inc., USA

**About the keynote speaker**

Widely recognized as the inventor of electronic cash, he is also known for first proposing cryptographic techniques -- including untraceable communication and credential mechanisms -- that more generally allow individuals to protect their identity and related information. David is also credited with a fundamental role in so-called multi-party computation and has over 50 publications and dozens of patents. With Ph.D in Computer Science from Berkeley, he taught at several universities, established a leading cryptography research group, and founded DigiCash and the International Association for Cryptologic Research.

**Summary:**

Scantegrity II, an enhancement for optical scan voting systems, achieves a level of integrity unprecedented in scalable elections. It uses unique confirmation codes that are printed on ballots in invisible ink. Voters mark their ballots just as with conventional fill-in-the-oval, but a special pen makes the ink visible so that voters can note the confirmation codes if they wish.

Verifiability of election integrity is complete: voters can check that their confirmation codes are correctly posted by looking them up online by ballot serial number; voters can check that codes correspond correctly to candidates by keeping a voided ballot; and anyone online can check that the tally is computed correctly from all posted codes by performing a simple computation. Even those running the election, and even if they had unlimited code breaking computational resources, would be detected if they tried to alter the outcome. Resistance to vote buying or coercion and the privacy provided are similar to that of the underlying optical scan system.

Scantegrity II works with scanners located in polling places, as in some countries, or at central locations, as would be practical in most other countries. Vote-by-mail, provisional ballots, and voters with disabilities can be accommodated. It is implemented in Java, is open-source, and includes sample programs to verify the proof that the outcome is correct. The system has been tested in small elections using off-the-shelf printers and scanners. A municipal election is planned for November 2009.

The novel techniques for in-person verification and unconditional transparent integrity will hopefully be applicable even beyond elections.
Keynote: Cache-Aware Scheduling and Analysis for Multicores

Prof. Wang Yi, Uppsala University, Sweden

About the keynote speaker

Wang Yi received his Ph.D. in computer science from Chalmers University of Technology, Sweden in 1991. He is a chair professor (Embedded Systems) at Uppsala University, and a professor in computer science at North Eastern University, China. He has been a program chair of TACAS, FORMATS, EMSOFT and HSCC, and a track chair of RTSS. He is or has been an editorial board member of Elsevier Journal of Computer Architectures, the Journal of Computer Science and Technology, and IEEE Transactions on Computers. His research interests include modeling and verification of real-time and embedded systems. He initiated (1993) and co-founded the UPPAAL tool (1995) and also the company UP4ALL (2007). He also co-founded the TIMES tool for scheduling and analysis of timed systems. His current interests are in the development of embedded and real-time applications on multi-core processors. He is directing the Swedish strategic research program CoDeR-MP: Computationally Demanding Real-Time Applications on Multi-core Platforms, in collaboration with ABB and SAAB. He is also a principle investigator of UPMARC: Uppsala Programming for Multi-core Architectures Research Center.

Summary:

The major obstacle to use multicores for real-time applications is that we may not predict and provide any guarantee on real-time properties of embedded software on such platforms; the way of handling the on-chip shared resources such as L2 cache may have a significant impact on the timing predictability. In this talk, we propose to use cache space isolation techniques to avoid cache contention for hard real-time tasks running on multicores with shared caches. We present a scheduling strategy for real-time tasks with both timing and cache space constraints, which allows each task to use a fixed number of cache partitions, and makes sure that at any time a cache partition is occupied by at most one running task. In this way, the cache spaces of tasks are isolated at run-time. As technical contributions, we present solutions for the scheduling analysis problem. For simplicity, the presentation will focus on non-preemptive fixed-priority scheduling. However, our techniques can be easily adapted to deal with other scheduling strategies like EDF. We have developed a sufficient schedulability test for non-preemptive fixed-priority scheduling for multicores with shared L2 cache, encoded as a linear programming problem. To improve the scalability of the test, we then develop our second schedulability test of quadratic complexity, which is an over approximation of the first test. To evaluate the performance and scalability of our techniques, we use randomly generated task sets. Our experiments show that the first test which employs an LP solver can easily handle task sets with thousands of tasks in minutes using a desktop computer. It is also shown that the second test is comparable with the first one in terms of precision, but scales much better due to its low complexity, and is therefore a good candidate for efficient schedulability tests in the design loop for embedded systems or as an on-line test for admission control.
Keynote: *Network Analysis and Visualization for Understanding Social Computing*

Prof. Ben Shneiderman, University of Maryland, USA

About the keynote speaker


Summary:

Social computing applications include fabulous success stories and widespread failures. Researchers, user interface designers, and community managers are all struggling to understand the dynamics and determinants of success. Network analysis methods and information visualization tools are rapidly improving to enable data gathering, sophisticated analysis, and comprehensible presentations that support predictive theories, business planning, and community decision making. Social computing is shifting from playful discretionary usage to mission critical applications such as community safety, healthcare delivery, and disaster response. A vast international research effort would help ensure success for these and other applications in business, education, and beyond.
Keynote: Social Computing Applications and Trends

Dr. Fei-Yue Wang, the Institute of Automation, CAS, China

About the keynote speaker

Dr. Fei-Yue Wang received his Ph.D in Computer and Systems Engineering, minor in Computer Science, from the Rensselaer Polytechnic Institute (RPI), Troy, New York, USA in 1990. Dr. Wang joined the University of Arizona in 1990 and is the Professor of Systems and Industrial Engineering and Director of the Program for Advanced Research in Complex Systems. In 1999, he founded the Intelligent Control and Systems Engineering Center at the Institute of Automation, Chinese Academy of Sciences, Beijing, China, under the support of the Outstanding Oversea Chinese Talents Program. Since 2002, he has been the Director of the Key Laboratory of Complex Systems and Intelligence Science at the Chinese Academy of Sciences. Since 2006, he has been the Vice President of the Institute of Automation at the Chinese Academy of Sciences. He was the Editor-in-Chief of the International Journal of Intelligent Control and Systems from 1995 to 2000, and Editor-in-Charge of Series in Intelligent Control and intelligent Automation from 1996 to 2004. His current research interests include modeling, analysis, and control mechanism of complex systems; Linguistic Dynamic Systems (LDS); intelligent control systems; intelligent spaces, intelligence and security informatics, and social computing. He has published more than 200 books, book chapters, and papers in those areas since 1984 and received more than $20 million and over ¥50 million RMB from NSF, DOE, DOT, NNSF, CAS, MOST, Caterpillar, IBM, HP, AT&T, GM, BHP, RVSI, ABB, and Kelon.

Dr. Wang is a member of Sigma Xi, ACM, AAAI, ASEE, and Fellow of the IEEE, INCOSE, IFAC and AAAS. He is the President of the IEEE Intelligent Transportation Systems Society, Chair of the Systems Management and Complexity Committee of the Chinese Academy of Management. He is a Department Editor and Editor-in-Chief of the IEEE Intelligent Systems, and was an Associate Editor for several IEEE Transactions from 1995 to 2005. He received Caterpillar Research Invention Award with Dr. P. J. A. Lever in 1996 for his work in data-mining-based robotic excavation, the National Outstanding Young Scientist Research Award from the National Natural Science Foundation of China in 2001, the National Awards in Nature Science from the State Council of the People's Republic of China in 2007 for his work in Theories and Algorithms of Intelligent Control, the ACM Distinguished Scientist Award from Association for Computing Machinery in 2007, as well as various industrial awards for his applied research from major corporations.

Summary:

Social computing is a new research field with a long history. Its origins can be traced back to the beginning of modern computing but the Internet and the wide adoption of IT in everyday life have motivated exciting new research directions and enabled tremendous opportunities that integrate cyber and physical worlds. In this talk, we will present a three-stage modeling, analysis, and control approach to social computing. This approach combines Artificial societies for modeling, Computational experiments for analysis, and Parallel execution for control. Case studies using the proposed ACP approach to solve significant engineering and management problems will be discussed.
Keynote: *White Space Networking - Is it Wi-Fi on Steroids?*

*Dr. Victor Bahl, Microsoft Research Redmond, USA*

About the keynote speaker

Victor Bahl is a Principal Researcher and founding Manager of the Networking Research Group in Microsoft Research Redmond. He is responsible for directing research activities that push the state-of-art in the networking of devices and systems. He and his group build proof-of-concept systems, engage with academia, publish papers in prestigious conferences and journals, publish software for the research community, and work with product groups to influence Microsoft's products. His personal research interests span a variety of topics in wireless systems design, mobile networking, and network management. He has built and deployed several seminal and highly cited networked systems with a total of over 7600 citations. His research has been incorporated into Microsoft's core products, industry standards, and numerous non-Microsoft commercial products. He has authored over 85 papers in highly-selective conferences and 114 patent applications, 60 of which have issued; he has delivered close to two dozen keynote & plenary talks; he is the founder and past Chairperson of ACM SIGMOBILE; the founder and past Editor-in-Chief of ACM Mobile Computing and Communications Review, and the founder and steering committee chair of the Mobile Systems Conference; he has served as the General Chair of several IEEE and ACM conferences including SIGCOMM and MobiCom, and is serving on the steering committees of seven IEEE & ACM conferences & workshops; he has served on the board of over half-a-dozen journals; on several NSF and NRC panels, and on over six dozen program committees. Dr. Bahl received Digital's Doctoral Engineering Fellowship Award in 1995 and SIGMOBILE's Distinguished Service Award in 2001. In 2004, Microsoft nominated him for the innovator of the year award. He became an ACM Fellow in 2003 and an IEEE Fellow in 2008. When not working, he loves to read, travel, eat in fine restaurants and spend time drinking with friends and family. More on him at http://research.microsoft.com/~bahl/.

Summary:

We began our journey with the goal of commoditizing pervasive connectivity for the remaining billions. We gravitated towards providing neighborhood connectivity in developing and rural regions. Businesses saw an opportunity and local government began to value blanket city-wide coverage. But success was not inevitable. Deployments failed and critics questioned the promises. Perhaps the technology was not ready for prime time. So we began "fixing" the technology, part of which included revisiting governmental policies around spectrum allocation. The US government listened and in a landmark ruling on Nov. 4, the FCC voted to open the unused low frequency bands for unlicensed use.

In this talk, I will discuss the evolution of our thinking on how to achieve open pervasive internet connectivity. I will highlight promising new directions that are full of interesting challenges. I will discuss solutions that researchers are developing and show their trajectory. My objective is to present what I believe is the new frontier of wireless networking and ubiquitous Internet, at the intersection of cognitive systems, mesh networking, and white spaces. I will challenge the audience into taking on new technical problems and thinking about new business models, which will lead us to success in our original goal of commoditizing pervasive connectivity for the masses, bridging the digital divide, and enabling exciting new applications and services in the process.
Keynote: *Computational Science and Engineering in Emerging Cyber-Ecosystems*

Prof. Manish Parashar, Rutgers University, USA

About the keynote speaker

Manish Parashar is Professor of Electrical and Computer Engineering at Rutgers University, where he also is director of the NSF Center for Autonomic Computing (CAC), associate director of the Rutgers Center for Information Assurance and director of the Applied Software Systems Laboratory. He received a BE degree in Electronics and Telecommunications from Bombay University, India and MS and Ph.D. degrees in Computer Engineering from Syracuse University. He has received the IBM Faculty Award (2008) Rutgers Board of Trustees Award for Excellence in Research (2004-2005), NSF CAREER Award (1999) and the Enrico Fermi Scholarship from Argonne National Laboratory (1996). His research is in the broad area of applied parallel & distributed computing and computational science, and specifically on solving science and engineering problems on very large systems. For more information please visit http://nsfcac.rutgers.edu/people/parashar/.

Summary:

Significant strategic investments are quickly realizing a pervasive computational cyber-infrastructure that integrates computers, networks, data archives, instruments, observatories, and embedded sensors and actuators. This in turn has the potential for enabling new paradigms and practices in computational science and engineering – those that symbiotically and opportunistically combine computations, experiments, observations, and real-time information. However the ability of scientists to realize this potential is being severely hampered primarily due to the increased complexity and dynamism of the applications and computing environments. Autonomic computing has the potential to fundamentally address these challenges. In this talk, I will motivate autonomies for computational science and engineering. I will then describe research efforts at TASSL, Rutgers University as part of the NSF Center for Autonomic Computing aimed at enabling autonomic scientific and engineering applications that can address the challenges of (and benefit from) pervasive computational ecosystems.
Keynote: *Trust Mechanisms and Their Applications in Dynamic and Mobile Computer Systems*

Prof. Jie Wu, Temple University, USA

About the keynote speaker

Jie Wu is chairman and professor in the Department of Computer and Information Sciences, Temple University. He was a program director at US National Science Foundation. His research interests include the areas of wireless networks and mobile computing, routing protocols, fault-tolerant computing, and interconnection networks. He has published more than 450 papers in various journals and conference proceedings. He serves in the editorial board of the IEEE Transactions on Mobile Computing. Dr. Wu was also general co-chair for IEEE MASS’06, IEEE IPDPS’08, and DCOSS’09. He has served as an IEEE Computer Society distinguished visitor and is the chairman of the IEEE Technical Committee on Distributed Processing (TCDP). Dr. Wu is a fellow of the IEEE.

Summary:

Reputation is the opinion of one entity about another. In an absolute context, it is the trustworthiness of an entity. The talk will start with different ways of building trust between entities based on reputation, which include direct contacts or third-party recommendations. Then different trust mechanisms used in computer systems are discussed and compared. The talk ends with various applications of trust mechanisms in dynamic and mobile computer systems.
**Keynote: From Reconfigurable Architectures to Self-Adaptive Autonomic Systems**

Dr. Marco D. Santambrogio, Massachusetts Institute of Technology, USA

**About the keynote speaker**

Marco D. Santambrogio received a Master degree in Computer Science from University of Illinois at Chicago and a Laurea in Computer Engineering from Politecnico di Milano, Italy in 2005. He received his Ph.D. degree in Computer engineering from the Politecnico di Milano, Italy in 2008 and he is now Postdoc Fellow at MIT in 2009. He has been with the Micro Architectures Laboratory at the Politecnico di Milano, where he founded the Dynamic Reconfigurability in Embedded System Design (DRESD) project in 2004. His main research interests are methodologies for dynamic reconfiguration and hardware/software co-design in embedded system.

**Summary:**

Systems on a Chip (SoC) can draw various benefits such as adaptability and efficient acceleration of compute-intensive tasks from the inclusion of reconfigurable hardware as a system component. Dynamic reconfiguration capabilities of current reconfigurable devices create an additional dimension in the temporal domain. During the design space exploration phase, overheads associated with reconfiguration and hardware/software interfacing need to be evaluated carefully in order to harvest the full potential of dynamic reconfiguration. In order to overcome the limits deriving by the increasing complexity and the associated workload to maintain such complex infrastructure, one possibility is to adopt self-adaptive and autonomic computing systems. A self-adaptive and autonomic computing system is a system able to configure, heal, optimize and protect itself without the need for human intervention.
A. Sessions and Papers in CSE-09

The 2009 IEEE International Conference on Computational Science and Engineering (CSE-09)

Keynote: Computational Science and Engineering in Emerging Cyber–Ecosystems (Chair: Hai-xiang Lin)
Prof. Manish Parashar, Rutgers University, USA

Session A11: Advanced Networking and Applications (Chair: Qing-An Zeng)
Performance Modelling and Analysis of Integrated WLANs and Internet-access Mesh Networks
Geyong Min, Yulei Wu, and Laurence T. Yang
A Trade-off Approach to Optimal Resource Allocation Algorithm with Cache Technology in Ubiquitous Computing Environment
Mianxiong Dong, Kaoru Ota, Song Guo, Minyi Guo, and Li Li
Self-Tuning the Parameter of Adaptive Non-linear Sampling Method for Flow Statistics
Chengchen Hu and Bin Liu

Session A12: Mobile Computing and Wireless Communications (Chair: Yulei Wu)
A Cognitive Approach to Achieve Fair Uplink and Downlink Utilities in Wireless Networks
Chiapin Wang and Kueihsiang Liang
A Weighted-Dissimilarity-Based Anomaly Detection Method for Mobile Wireless Networks
Ihn-Han Bae and Stephan Olariu
A Novel Resource Management Scheme for Integrated Multiple Traffic Heterogeneous Systems
Cheng Zhu, Qing-An Zeng, and Dharma Agrawal

Session A13: Database and Data Mining (Chair: Carson Leung)
Scalable APRIORI-Based Frequent Pattern Discovery
Sean Chester, Ian Sandler, and Alex Thomo
Event-Driven Approach for Logic-based Complex Event Processing
Darko Anicic, Paul Fodor, Roland Stuehmer, and Nenad Stojanovic
Incremental Discovery of Sequential Patterns Using a Backward Mining Approach
Ming-Yen Lin, Sue-Chen Hsueh, and Chih-Chen Chan

Session A14: Cluster and Grid Computing I (Chair: Jinjun Chen)
Data Distribution Methods for Communication Localization in Multi-Clusters with Heterogeneous Network
Shih-Chang Chen, Ching-Hsien Hu, and Chun-Te Chiu
An Analytical Model of Communication Networks in Multi-cluster Systems in the Presence of Non-uniform Traffic
Hojjat Sharifi, Mohammad K Akbari, and Bahman Javadi
Balanced and Efficient Data Placement and Replication Strategy for Distributed Backup Storage Systems
K. Renuga, S.S. Tan, Y.Q. Zhu, T.C. Low, and Y.H. Wang

Session A15: Cluster and Grid Computing II (Chair: Salvatore Venticinque)
Improvement on Scheduling Dependent Tasks for Grid Applications
Elaine C.Machtans, Liria M.Sato, and Airton Deppman
Fault-Tolerance Scheduling by Using Rough Set Based Multi-checkpointing on Economic Grids
Asgarali Bouyer, Abdul Hanan Abdullah, Hassan Ebrahimpour, and Firouz Nasrollahi
A Volunteer-Computing-Based Grid Environment for Connect6 Applications
I-Chen Wu, Chingping Chen, Ping-Hung Lin, Guo-Chan Huang, Lung-Ping Chen, Der-Johng Sun, Yi-Chih Chan, et al.

Session A16: Pervasive and Ubiquitous Computing (Chair: Robert C. H. Hsu)
A Safe RSS Approach for Securely Sharing Mobile SVG Biomedical Images for Web 2.0
Sabah Mohammed, Lyle F. Chamarette, Jinan Fluidhi, and Sylvia Osborn
An Energy Efficient Routing Protocol in Wireless Sensor Networks
Kyung Tae Kim, Byung Jin Lee, Jae Hyun Choi, Bo Ye Jung, and Hee Yong Youn
Location-based Adaptive Mobile Learning Research Framework and Topics
Qing Tan, Kinshuk, Yen-Hung Kuo, Yu-Lin Jeng, Po-Han Wu, Yueh-Min Huang, Tzu-Chien Liu, and Maiga Chang

Session A17: CSE Applications I (Chair: Jian-Hung Chen)
Stable Bayesian Parameter Estimation for Biological Dynamical Systems
Alberto Giovanni Busetto and Joachim M. Buhmann
On Performance Enhancement of Circuit Simulation Using Multithreaded Techniques
Ruey-Kuen Perng, Tien-Hsiung Weng, and Kuan-Ching Li
A Software Architecture-Based Framework Supporting Suggestion of Medical Surveillance Level from Classification of Electronic Patient Records

Session A18: Intelligent and Bio-inspired Computing (Chair: Ruppa Thulasiram)
Robust Translational Motion of Single-row SPCE by the Parallel Binocular
Gwo-Long Lin
Mining Frequent Patterns with Gaps and One-off Condition
Yongming Huang, Xindong Wu, Xuegang Hu, Fei Xie, Jun Gao, and Gongqing Wu
An Evolutionary Approach for Multi-objective 3D Differentiated Sensor Network Deployment
Chih-Wei Kang and Jian-Hung Chen

Session A19: Distributed and Parallel Computing I (Chair: Hai Jiang)
A Coarse-Grain Parallel Genetic Algorithm for Flexible Job-Shop Scheduling with Lot Streaming
Fantahun M. Defersha and Mingyuan Chen
Parallel Computation of Nash Equilibria in N-Player Games
Jonathan Widger and Daniel Gross
An Efficient Dynamic Load Balancing Scheme for Multi-agent System Reflecting Agent Workload
Yong Hee Kim, Seungwok Han, Chang Hun Ryu, and Hee Yong Youn

Session A1A: Distributed and Parallel Computing II (Chair: Hai Jiang)
Efficient Broadcast on Area of Interest in Voronoi Overlays
Michele Albano, Ranieri Baraglia, Matteo Mordacchini, and Laura Ricci
Hardware Supported Multicast in 2-D Mesh InfiniBand Networks
Jiazheng Zhou, Shen-En Liu, and Yeh-Ching Chang
Energy Consumption of Residential and Professional Switches
Helmut Harvac, Georges da Costa, and Jean-Marc Pierson

Session A1B: Scientific and Engineering Computing (Chair: Hai-xiang Lin)
A Comparative Study of Blocking Storage Methods for Sparse Matrices on Multicore Architectures
Vasileios Karakasis, Georgios Goumas, and Nectarios Koziris
MCD: Mesh Closure Detection for Localized Load Balancing in Scientific Applications
Chonglei Mei, Ruipeng Li, Hai Jiang, and Jeff Jenness
Robust Optimization on Across-chain Inventory Control of Cluster Supply Chains
Jizi Li, Naixue Xiong, Chunling Liu, Linfu Sun, Ming Cao, and Shaohua Wan

Session A1C: CSE Applications II (Chair: Ruppa Thulasiram)
Integration of Mobile Agents Technology and Globus for Assisted Design and Automated Development of Grid Services
Rocco Aversa, Beniamino Di Martino, and Salvatore Venticinque
Parameter Identifiability and Optimal Experimental Design
Elias August
High Performance Printing: Increasing Personalized Documents Rendering through PPML Jobs Profiling and Scheduling
Thiago Nunes, Mateus Raeder, Mariana Kolberg, Luiz Gustavo Fernandes, Alexis Cabeda, and Fabio Giannetti

The 2009 International Symposium on Scientific and Engineering Computing (SEC-09)

Session A21: Cluster and Grid Computing (Chair: Jinjun Chen)
A P2P Hierarchical Metascheduler to Obtain QoS in a Grid Economy Services
Maycon L.M. Peixoto, Marcos J. Santana, and Regina H.C. Santana
An Architecture for Integrating Databases with Replication Support Based on the OGSA-DAI Middleware
Mathias Brito, Fernando Kakugawa, Liria Sato, Pedro Correa, Luciano Ogiboski, and Rogerio Leis
Performance Comparison of Four-Socket Servers Architecture on HPC Workload
Verdi March and Simon See

Session A22: Database and Data Mining (Chair: Carson Leung)
XML with Recursive Querying
Kamal Taha and Ramez Elmasri
An Efficient High-Dimensional Indexing Scheme Using a Clustering Technique for Content-based Retrieval
Hyun-Jo Lee, Hyeong-II Kim, and Jae-Woo Chang
IMBT - A Binary Tree for Efficient Support Counting of Incremental Data Mining
Chia-Han Yang and Don-Lin Yang
Optimization of Distributed SPARQL Queries Using Edmonds' Algorithm and Prim's Algorithm
Ben P. Vandervalk, E. Luke McCarthy, and Mark D. Wilkinson

Session A23: Pervasive and Ubiquitous Computing (Chair: Chiu-Kuo Liang)
An Effective Data Gathering Scheme in Heterogeneous Energy Wireless Sensor Networks
Yingchi Mao, Zhen Liu, Lili Zhang, and Xiaofang Li
Kyung Tae Kim, Won Jun Choi, Myung Jin Whang, and Hee Yong Youn
Spiral Grid Routing for Load Balance in Wireless Sensor Networks
Chiu-Kuo Liang and Chih-Shiou Li
Study on 3D Annotation in Virtual Space for Collaboration
Eun-Joo Sin, Yoon-Chul Choy, and Soon-Bum Lim
Analysis of 2-State, 3-Neighborhood Cellular Automata Rules for Cryptographic Pseudorandom Number Generation
Sang-Ho Shin and Kee-Young Yoo

Session A24: CSE Applications (Chair: Chenghua Li)
SVM based Hybrid Moment Features for Natural Scene Categorization
Devendran V, Hemalatha Thiagarajan, and Amitabh Wahi
A Fast Backlight Module Luminance Inspection Method
Wu-Ja Lin and Chih-Wei Ho
SOM-Based Hedge Ratio Estimation with Hierarchical Cluster Resampling
Yu-Chia Hsu and An-Pin Chen
Development of Integrated Retrieval Methods for OpenAPIs and Mash-Up Capable Services
Seung-Jun Cha and Kyu-Chul Lee

Session A25: Dependable and Secure Computing I (Chair: Tony Li Xu)
Minesweeper for Sensor Networks-Making Event Detection in Sensor Networks Dependable
Karima B. Hein and Reinhold Weiss
An Evaluating Model for Anti-virus Ability Based on AHP
Ming Liu, Lansheng Han, Mengsong Zou, and Qiwen Liu
A New Security Mechanism to Perform Traffic Anonymity with Dummy Traffic Synthesis
Wazen M. Shbair, Ahmed R. Bashandy, and Samir I. Shaheen

Session A26: Distributed and Parallel Computing (Chair: Hao Wang)
Implementation and Evaluation of Modular Neural Networks in a Multiple Processor System on Chip to Classify Electric Disturbance
Danniel Cavalcante Lopes, Rafael Marrocos Magalhães, Jorge Dantas de Melo, and Adrião Duarte Dória Neto
A New Hierarchical Network Coordinate Algorithm Based on Community Structure
Zilong Ye, Yabing Liu, and Siguang Chen
Power Efficient Large Matrices Multiplication by Load Scheduling on Multi-core and GPU platform with CUDA
DaQi Ren and Reiji Suda
A Design Methodology for Self-Management in Distributed Environments
Ahmad Al-Shishtawy, Vladimir Vlassov, Per Brand, and Seif Haridi

Session A27: Scientific and Engineering Computing (Chair: Robert C. H. Hsu)
Computer Simulation of the Anisotropy of Fluorescence in Ring Molecular Systems: Influence of Disorder and Ellipticity
Pavel Herman, David Zapletal, and Ivan Barvík
Flattened Conservative Parallel Simulator for DEVS and CELL-DEVS
Shafagh Jafer and Gabriel Wainer
Supply Chain Design Model Based on Multi-supply Hubs
Jizi Li, Naixue Xiong, Linfu Sun, Aping Yuan, Jingyi Chen, and Ming Cao
B. SESSIONS AND PAPERS IN EUC-09

The 7th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC-09)

Keynote: Cache-Aware Scheduling and Analysis for Multicores (Chair: Jingling Xue)

Prof. Wang Yi, Uppsala University, Sweden

Keynote: White Space Networking – Is it Wi-Fi on Steroids? (Chair: Victor Leung)

Dr. Victor Bahl, Microsoft Research Redmond, USA

Session B11: Embedded Systems and HW/SW Codesign (Chair: Jingling Xue)

On the Design of a Suitable Hardware Platform for Protocol Stack Processing in LTE Terminals

Sebastian Hessel, David Szczesny, Shadi Traboulsi, Attila Bilgic, and Josef Hausner

A Region-Based Allocation Approach for Page-Based Scratch-Pad Memory in Embedded Systems


Reducing Leakage Power of JPEG Image on Asymmetric SRAM

Yu-Hsun Lin, Xuan-Yi Lin, and Yeh-Ching Chung

Session B12: Multimedia and Data Management (Chair: Jianhua Ma)

Fast Inter Mode Decision Algorithm Based on the MB Activity for MPEG-2 to H.264/AVC Transcoding

Xingang Liu, Wei Zhu, and Kook-Yeol Yoo

Dynamic Reconfigurable Shaders with Load Balancing for Embedded Graphics Processing

Yi-Chi Chen, Hui-Chin Yang, Chung-Ping Chung, and Wei-Ting Wang

Real Time Multiple Object Tracking Using Tracking Matrix

Fei Hao, Zhenjiang Miao, Ping Guo, and Zhan Xu

Visible and IR Data Fusion Technique Using the Contourlet Transform

Soad Ibrahim and Michael Wirth

Session B13: Power-Aware Computing (Chair: Man Lin)

Rotation Scheduling and Voltage Assignment to Minimize Energy for SoC

Meikang Qiu, Laurence T. Yang, and Edwin H.-M. Sha

Grouping-Based Dynamic Power Management for Multi-threaded Programs in Chip-multiprocessors

Mu-Kai Huang, J. Morris Chang, and Wei-Mei Chen

K-Stage Pipelined Bloom Filter for Packet Classification

Mahmood Ahmadi and Stephan Wong

Session B14: Sensor Networks (Chair: Ming Hong)

A Two-Stage Bootloader to Support Multi-Application Deployment and Switching in Wireless Sensor Networks

Alan Marchiori and Qi Han

Residual Time Aware Forwarding for Randomly Duty-Cycled Wireless Sensor Networks

Long Cheng, Canfeng Chen, Jian Ma, Lei Shi, Hongyang Chen, and Laurence T. Yang

The More Relay Nodes, The More Energy Efficient?

Ying Zhu and Qi Han

Malady: A Machine Learning-Based Autonomous Decision-Making System for Sensor Networks

Sudha Krishnamurthy, Geethapriya Thamilarasu, and Christian Bauckhage

Design of an RFID Air Protocol Filtering Technique

Hyun-Sung Park and Jong-Deok Kim

Completely Distributed Low Duty Cycle Communication for Long-living Sensor Networks

Marcin Brzozowski, Hendrik Salomon, and Peter Langendoerfer

Session B15: Wireless Communications (Chair: Qing-An Zeng)

Design and Implementation of WLAN-Based Automatic Vehicle Identification

Hyun-Sung Park, Seung-Chae Yang, Doo-Hwan Oh, and Jong-Deok Kim

Adaptive and Intelligent Route Learning for Mobile Assets using Geo-tracking and Context Profiles

Dineshbalu Balakrishnan, Amiya Nayak, and Pulak Dhar

Control-Channel-Reuse-Based Multiple-Channel MAC (CRM-MAC) for Ad Hoc Networks

Dinyu Sardana and Qing-An Zeng

Session B16: Middleware and P2P (Chair: Young-Sik Jeong)

Analysing Bit Torrent’s Seeding Strategies

Xiaxiao Chen and Stephen A. Jarvis

A Middleware for Controlling the Execution of Composite Services

Xinfeng Ye and Yi Chen

2T-DHT: A Two Tier DHT for Implementing Publish/Subscribe

Mayank Pandey, Syed Mustaq Ahmed, and Banshi Dhar Chaudhary

mBrace: Action-based Performance Monitoring of Multi-tier Web Applications

Andrey van der Zee, Alexandre Courbot, and Tatsuo Nakajima
Session B17: Embedded Software and Optimization I (Chair: Minyi Guo)
Reducing Code Size by Graph Coloring Register Allocation and Assignment Algorithm for Mixed-Width ISA Processor
Jyh-Shian Wang, I-Wei Wu, Yu-Sheng Chen, Jean Jyh-Jui Shunn, and Wei-Chung Hsu
Optimization of Component Connections for an Embedded Component System
Takuya Azumi, Hiroshi Oyama, and Hiroaki Takada
Improving Hybrid Flash-Disk Storage by Incorporating Sequential Pattern Mining into Fully-Associative Sector Translation
Un-Keun Yoon and Han-joon Kim

Session B18: Pervasive and Ubiquitous Computing I (Chair: Runhe Huang)
Distributed Agents Network for Ubiquitous Monitoring and Services Exploitation
Rocco Aversa, Beniamino Di artino, and Salvatore Venticinque
Extended Dempster-Shafer Theory in Context Reasoning for Ubiquitous Computing Environments
Daiqiang Zhang, Jianmiong Cao, Jingyu Zhou, and Minyi Guo
GUPSS: A Gateway-Based Ubiquitous Platform for Smart Space
Tomomi Kawashima, Jianhua Ma, Runhe Huang, and Bernady O. Apduhan
Leveraging Computation Sharing and Parallel Processing in Location-based Services
Jonathan Cazalas and Kien Hua
A Recommendation Framework towards Personalized Services in Intelligent Museum
Shandan Zhou, Xingshe Zhou, Zhiwen Yu, Kaiibo Wang, Haipeng Wang, and Hongbo Ni

Session B19: Dependable, Autonomic, Secure Computing (Chair: Alexandre Sztajnberg)
Finding the Needle: Suppression of False Alarms in Large Intrusion Detection Data Sets
James J. Treinen and Ramakrishna Thurimella
Self-adaptation of Fault Tolerance Requirements Using Contracts
André Luiz B. Rodrigues, Leila N. Bezerra, Alexandre Sztajnberg, and Orlando Loques
Architectural Support for Automated Software Attack Detection, Recovery, and Prevention
Jesse Sathre, Alex Baumgarten, and Joseph Zambreno

Session B1A: Real-Time and Cyber-Physical Systems (Chair: Wang Yi)
Swift Mode Changes in Memory Constrained Real-Time Systems
Mike Holenderski, Reinder J. Bril, and Johan J. Lukkien
WCET Analysis of the UC/OS-II Real-Time Kernel
Mingsong Ly, Nan Guan, Yi Zhang, Rui Chen, Qingxu Deng, Ge Yu, and Wang Yi
Real Time Rectification for Stereo Correspondence
Khaust, Ahmed, John Morris, Tariq Khan, and Georgy Gimel'farb
Coordinated Runtime Adaptations in Cooperative Open Real-Time Systems
Luis Nogueira, Luis Miguel Pinho, and Jorge Coelho
Avoiding Delay Jitter in Cyber-physical Systems Using One Way Delay Variations Model
Huthaifa Al-Omari, Francis Wolff, Christos Papachristou, and David McIntyre

Session B1B: Pervasive and Ubiquitous Computing II (Chair: Salvatore Venticinque)
Performance Analysis of an HMM-Based Gesture Recognition Using a Wristwatch Device
Roman Amstutz, Oliver Amft, Brian French, Asim Smailagic, Dan Siewiorek, and Gerhard Troester
A Tree-Structured Intelligence Entity Pool and Its Sharing among Ubiquitous Objects
Runhe Huang, Jianhua Ma, and Qun Jin
A Lightweight Architecture for Secure Two-party Mobile Payment
Yanzhu and Jacqueline E. Rice

Session B1C: Embedded Software and Optimization II (Chair: Jenq Kuen Lee)
Better than Optimal: Fast Identification of Custom Instruction Candidates
Joseph Reddington, Gregory Gutin, Adrian Johnstone, Elizabeth Scott, and Anders Yeo
Comparison of Bank Change Mechanisms for Banked Reduced Encoding Architectures
Je-Hyung Lee, Soo-Mook Moon, and Hyung-Kyu Choi
Optimizing Embedded Virtual Machines
Joel Koshy, Raju Pandey, and Ingvar Wirjawan
Support of Paged Register Files for Improving Context Switching on Embedded Processors
Chang-Wen Huang, Kun-Yuan Hsieh, Jia-Jhe Li, and Jenq Kuen Lee
Dynamic Scratch-Pad Memory Management with Data Pipelining for Embedded Systems
Yanqin Yang, Meng Wang, Zili Shao, and Minyi Guo
Evaluating the Performance of a Chaos Genetic Algorithm for Solving the Network on Chip Mapping Problem
Fahime Moein-darbari, Ahmad Khademzadeh, and Golnar Gharooni-fard
The 2009 International Symposium on Embedded and Pervasive Systems (EPS-09)

Session B21: Real-time Embedded Systems (Chair: Antônio A. Fröhlich)

On the Design of Flexible Real-Time Schedulers for Embedded Systems
Hugo Marcondes, Rafael Cancian, Marcelo Stemmer, and Antônio Augusto Fröhlich

Delayed Interrupt Processing Technique for Reducing Latency of Timer Interrupt in Embedded Linux
Maobing Dai and Yutaka Ishikawa

Practical Implementation of a Middleware and Software Component Architecture Supporting Reconfigurability of Real-time Embedded Systems
Mariusz Pelc, Richard Anthony, James Hawthorne, and Paul Ward

Session B22: Data Management and Multimedia (Chair: Doo-Soon Park)

Blocked-Z Test for Reducing Rasterization, Z Test and Shading Workloads
Chung-Ping Chung, Hong-Wei Chen, and Hui-Chin Yang

A Hierarchical Primitive Lists Structure for Tile-Based Rendering
Chih-Chieh Hsiao, Chung-Ping Chung, and Hui-Chin Yang

Methods for Precise False-Overlap Detection in Tile-Based Rendering
Hsiu-ching Hsieh, Chih-Chieh Hsiao, Hui-Chin Yang, Chung-Ping Chung, and Jean Jyh-Jiun Shann

H-Buffer: An Efficient History-Based and Overflow Sharing Transparent Fragment Storage Method
Chung-Ping Chung, Tung-Lin Lu, and Hui-Chin Yang

HyperCircle: An Efficient Broadcast Protocol for Super-Peer P2P Networks
Feiyu Lin, Christopher Henricsson, Syed Muhammad Abbas, and Kurt Sandkuhl

Session B23: Wireless Communications (Chair: Janet Light)

Caching-Based Multipath Routing Protocol
Vineet Joshi, Xuefu Zhu, and Qing-An Zeng

A Coordinating Multiple Channel Assignment Scheme and AP Deployment in a Wireless Network
Fang-Yie Leu and Yao-Tian Huang

Analysis of Vehicular Roaming through Multiple WLAN APs in Container Terminal
Hyun-Sung Park, Seung-Ho Han, and Jong-Deok Kim

Session B24: Mobile Computing (Chair: Yulei Wu)

Processing Approximate Moving Range Queries in Mobile Sensor Environments
Antoniya Petkova, Kien A. Hua, and Alexander Aved

Service-Oriented Adaptation in Ubiquitous Computing Environments
Kurt Geihs, Roland Reichle, Michael Wagner, and Mohammad Ullah Khan

Rehoming Decision Algorithm: Design and Empirical Evaluation
Amine Dhraief and Nicolas Montavon

Black Bridge: A Scatternet Formation Algorithm for Solving a New Emerging Problem
Yanqin Yang, Minyi Guo, Feilong Tang, and Gongwei Zhang

Choosing Service Directory Nodes in Proposed Service Discovery Model for Mobile Ad-hoc Networks
Shengrong Bu and Peter Liu

Accumulating a Personalised Ubiquitous Learning Platform for Enhancing the Third Level Educational Experience
Olapeju Latifat Ayoola and Dr Eleni Mangina

Session B25: Reliability and Security (Chair: Guojun Wang)

Kunjan Patel, Jong Chen Lim, C.J. Bleakley, and Wim Vanderbaeckhe

A Hierarchical Authentication Scheme for the Different Radio Ranges Sensor Networks
Ang Gao, Wei Wei, Zhixiao Wang, and Yan Wenyao

Are You a Safe Driver
Lonnie Langle and Ram Dantu

Session B26: Optimization and HW/SW Co-designs (Chair: Pao-Ann Hsiung)

Performance Improvement for Flash Memories Using Loop Optimization
Joon-Young Paik, Eun-Sun Cho, and Tae-Sun Chung

Efficient and Adapted Component-Based Strategies for Embedded Software Device Drivers Development
Juan Navas and Jean-Philippe Babau

The Software and Hardware Integration Linker for Reconfigurable Embedded System
Jih-Ching Chiu, Ta-Li Yeh, and Man-Kit Leong

Codesign of Embedded Systems with Process/Module Level Real-time Deadlines
Gul N. Khan and Anika Awwal

Pricing the American Option Using Reconfigurable Hardware
Christopher Wynnyk and Malik Magdon-Ismail

Session B27: Power/Energy-Aware Computing (Chair: Meikang Qiu)

Roy Chaoming Hsu, Cheng-Ting Liu, Kuan-Chieh Wang, and Wei-Ming Lee
Kenji R. Yamamoto and Paul G. Flikkema
Self-Organized Data-Energy-Aware Clustering and Routing for Wireless Sensor Networks
Ehsan Sakhaei, Naoki Wakamiya, and Masayuki Murata
A New Energy-Balanced Data Aggregation Scheme in Wireless Sensor Networks
Rabindra Bista, Yong-Ki Kim, Young-Ho Choi, and Jae-Woo Chang

Session B28: Sensor Networks (Chair: Marco Avvenuti)
Dispatch of Mobile Resources in Wireless Sensor Networks
Tsung-Shi Chen, Hua-Wen Tsai, and Chih-Wei Wei
A Time & Energy Efficient Topology Discovery and Scheduling Protocol for Wireless Sensor Networks
Abdulaziz Barnawi and Rosalyn Hafez
Precision Time Synchronization Using IEEE 1588 for Wireless Sensor Networks
Hyuntae Cho, Jeonsu Jung, Bongrae Cho, Youngwoo Jind, Seung-Woo Lee, and Yunju Baek
Localization of Shipping Containers in Ports and Terminals Using Wireless Sensor Networks
Stefano Abbate, Marco Avvenuti, Paolo Corsini, and Alessio Vecchio
A Failure Adapted, Load-Balanced Distributed Routing for Wireless Ad-Hoc Sensor Networks
Shahram Nourizadeh, Y.Q. Song, and J-P Thomesse
Evaluation of an Adaptive PI Rate Controller for Congestion Control in Wireless Ad-Hoc/Sensor Networks
Chung-Horng Lung and Oliver W.W. Yang

The 4th International Symposium on Cloud and Convergence Computing (2CCom-09)

Session B31: Cloud and Convergence Computing (Chair: Doo-Soon Park)
Visualization of the Constrained Coverage of Mobile Sensor Networks Based on GML
Chang-Wu Lee, Sung-Won Kim, Hee-Jong Lee, Young-Hee Han, Doo-Soon Park, and Young-Sik Jeong
A Resource Management System for Fault Tolerance in Grid Computing
HwaMin Lee, DooSoon Park, Min Hong, Sang-Soo Yoo, SooKyun Kim, and SungHoon Kim
A Distributed Reservation Protocol for Collision-Free Three-Hop Mobility Support in WiMedia MAC
Jin-Woo Kim, Kyeong Hur, Kwang-il Hwang, and Doo-Soep Eom
Distributed Tag Access with Collision-Avoidance among Mobile RFID Readers
Kwang-il Hwang, Sang-Soo Yoo, and Jong Hysik Park
Reprogrammable Module-Linker for Energy-Efficient Wireless Sensor Networks
Seung-Ku Kim, Jae-Ho Lee, Kwang-il Hwang, Kyeong Hur, and Doo-Soep Eom
Robust ID-Based Remote Mutual Authentication with Key Agreement Scheme for Mobile Devices on ECC
Eun-Jun Yoon and Kee-Young Yoo

The 2009 International Symposium on Trusted Computing and Communications (TrustCom-09)

Welcome Message from Symposium Chairs (Guojun Wang, Central South University, China)
Keynote: Trust Mechanisms and Applications in Dynamic and Mobile Systems (Chair: Helen Y. Tang)
Prof. Jie Wu, Temple University, USA

Session B41: Trust Model, Propagation and Management (Chair: Lan Wang)
Modeling and Analysis of Trust Management for Cognitive Mission-Driven Group Communication Systems in Mobile Ad Hoc Networks
Jin-Hee Cho, Ananthram Swami, and Ing-Ray Chen
Design and Validation of PATRICIA for the Mitigation of Network Flooding Attacks
Lan Wang, Qishi Wu, and Yaoqing Liu
Data deletion with Time-Aware Adversary Model
Marek Klonowski, Michal Przykucki, and Tomasz Struminski
Obfuscation Mechanism in Conjunction with Tamper-Proof Module
Kazuhide Fukushima, Shinsaku Kiyomoto, and Toshiaki Tanaka
TBDRM: A TPM-Based Secure DRM Architecture
Aimin Yu, Dengguo Feng, and Ren Liu
A Novel Server-Based Application Execution Architecture
Chao Chen, Ke Wang, Shuren Liao, Quyan Zhang, and Yiqi Dai
Multidimensional Dynamic Trust Management for Federated Services
Latifa Boursas and Wolfgang Hommel

Session B42: Trusted Services and Applications (Chair: Jin-Hee Cho)
Security Protocol Testing Using Attack Trees
Anderson Morais, Eliane Martins, Ana Cavalli, and Willy Jimenez
Optimal LFSR-Coding Test Data Compression Based on Test Cube Dividing
Maoxiang Yi, Huaguo Liang, Kainhua Zhan, and Cuiyun Jiang

Quasi-Classical Semantics and Tableau Calculus of Description Logics for Paraconsistent Reasoning in the Semantic Web
Hui Hou and Jinzhao Wu

Concurrency Control Strategy to Reduce Frequent Rollbacks in Mobile Environments
Salman Abdul Moiz and Lakshmi Rajamani

Session B43: Cryptography and Security Protocols (Chair: Nicolai Kuntze)
An Efficient Privacy Preserving Keyword Search Scheme in Cloud Computing
Qin Liu, Guojun Wang, and Jie Wu

A Direct Anonymous Attestation Protocol Based on Hierarchical Group Signature
Yu Rongwei, Wang Lina, Ma Xiaoyan, and Kuang Bo

Zhenyu Wang, Jianhua Huang, Yu Wang, Xiangdong Li, Xuetao Sun, and Ruimin Wang

An Anonymous Property-Based Attestation Protocol from Bilinear Maps
Yu Qin, DengGuo Feng, and Zhen Xu

Bio-Chaotic Stream Cipher-Based Iris Image Encryption
Abdullah Sharaf Alghamdi, Maqsood Mahmud, and Muhammad Khurram Khan

Session B44: Reliability, Survivability and Fault-Tolerance (Chair: Hai Jiang)
Trust-Based Countermeasures for Securing OLSR Protocol
Asmaa Adhane, Christophe Bidan, and Rafael de Sousa timotéo Junior

Fault Tolerance in MANETs Using a Task-to-Resource Reallocation Framework
Adrian P. Lau and William H. Robinson

An Effective RM-Based Scheduling Algorithm for Fault-Tolerant Real-Time Systems
Wenfu Ding and Rui Feng Guo

RepCom: Towards Reputation Composition over Peer-to-Peer Communities
Gang Yin, Dianxi Shi, Hua Min Wang, and Min Guo

HASS: Highly Available, Scalable and Secure Distributed Data Storage Systems
Zhiqian Xu and Hai Jiang

Reliable Identities using Off-the-Shelf Hardware Security in MANETs
Nicolai Kuntze, Carsten Rudolph, and Andreas Fuchs

Session B45: Access Control and Authentication (Chair: Ruixuan Li)
Distributed Node Selection for Threshold Key Management with Intrusion Detection in Mobile Ad Hoc Networks
F. Richard Yu, Helen Tang, Fei Wang, and Victor C.M. Leung

HACK: A Health-based Access Control Mechanism for Dynamic Enterprise Environments
Chenjia Wang, Kevin P. Monaghan, and Weisong Shi

Misbehavior Detection Using Implicit Trust Relations in the AODV Routing Protocol
Mohamed Ali Ayachi, Christophe Bidan, Tarek Abbes, and Adel Bouhoula

DAAODV: A Secure Ad-Hoc Routing Protocol Based on Direct Anonymous Attestation
Wenchao Huang, Yan Xiong, and Depin Chen

A GEP-based Anomaly Detection Scheme in Wireless Sensor Networks
Honglei Gao, Guolong Chen, and Wenzhong Guo

L-UCON: Towards Layered Access Control with UCON
Hao Hu, Hao Li, and Dengguo Feng

Session B46: Trusted Computing Platform and Software (Chair: Hamid Mehrvar)
Hardware Containers for Software Components: A Trusted Platform for COTS-Based Systems
Eugen Leontie, Gedare Bloom, Bhagirath Narahari, Rahul Simha, and Joseph Zambreno

A Software Based Approach for Trusted Agent Execution on Malicious Host
Sarosh Hashmi and John Brooke

A Smart Card Power Analysis Simulator
Céline Thuillet, Philippe Andouard, and Olivier Ly

TSGen: A UML Activity Diagram-based Test Scenario Generation Tool
Chang-ai Sun, Baohao Zhang, and Jin Li

Light-Weight Hardware Return Address and Stack Frame Tracking to Prevent Function Return Address Attack
Wen-Fu Kao and S. Felix Wu

RBAC-based Secure Interoperation Using Constraint Logic Programming
Jinwei Hu, Ruixuan Li, and Zhengding Lu
The 2nd International Workshop on Adaptation in Wireless Sensor Networks (AWSN-09)

Session B51: Adaptation in Wireless Sensor Networks (Chair: Marco Avvenuti)

Key Predistribution Schemes Using Block Designs in Wireless Sensor Networks
Sushmita Ruj, Jennifer Seberry, and Bimal Roy

HWSN6: Hospital Wireless Sensor Networks Based on 6LoWPAN Technology: Mobility and Fault Tolerance Management
Antonio J. Jara, Miguel A. Zamora, and Antonio F. G. Skarmeta

Autonomous Management and Control of Sensor Network-based Applications
A. G. Ruzzelli, C. Muldoon, A. Schoofs, T. Campagna, G. M. P. O'Hare, and R. Tynan

Intelligent Middleware for Adaptive Sensing of Tennis Coaching Sessions
Richard Tynan, Anthony Schoofs, Conor Muldoon, G. M. P. O'Hare, Ciaran O'Connor, Philip Kelly, and Noel E. O'Connor

Petri Net Based Reconfigurable Wireless Sensor Networks for Intelligent Monitoring Systems
Chung-Hsien Kuo and Jia-Wun Siao

The 2009 International Workshop on Reconfigurable, Multicore Embedded Systems (WoRMES-09)

Keynote: From Reconfigurable Architectures to Self-Adaptive Autonomic Systems (Chair: Pao-Ann Hsiung)
Dr. Marco D. Santambrogio, Massachusetts Institute of Technology, USA

Session B61: Reconfigurable and Multicore Embedded Systems (Chair: Pao-Ann Hsiung)

Architecture Synthesis Methodology for Run-Time Reconfigurable Systems
Pil Woo Chun and Lev Kirischian

Run-Time Component Relocation in Partially-Reconfigurable FPGAs
Victor Dumitriu, Dennis Marcantonio, and Lev Kirischian

Efficient Translation of Algorithmic Kernels on Large-Scale Multi-Cores
Amit Pande and Joseph Zambrano

Multi-Objective Placement of Reconfigurable Hardware Tasks in Real-Time System
Chun-Hsien Lu, Hsiao-Win Liao, and Pao-Ann Hsiung

The 2009 International Workshop on Pervasive Multimedia Sensor Networks (PMSN-09)

Session B71: Pervasive Multimedia Sensor Networks (Chair: Min Chen)

A Fast H.264 Spatial Downscaling Transcoder for Wireless Communication
Min Li, Naixue Xiong, and Chao Ma

Link-Aware Geographic Routing in Wireless Sensor Networks
Heng Chen, Depei Qian, Weiguo Wu, and Weiwei Fang

A Congestion Control Framework for Handling Video Surveillance Traffics on WSN
M. Maimour, C. Pham, and D. Hoang

Session B72: Pervasive Multimedia Sensor Networks (Chair: Min Chen)

Research on an Improved Genetic Algorithm Which Can Improve the Node Positioning Optimized Solution of Wireless Sensor Networks
Bing Jiang, Wei Zhang, and Pan Zhang

A Self-Similarity Frame Traffic Model Based on the Frame Components in 802.11 Networks
Lin Xiang, Xiaohu Ge, Ke Zhang, and Chuang Liu

Cross-Layer Optimized Data Gathering in Wireless Multimedia Sensor Networks
Lei Shi, Manfred Hauswirth, Lei Wang, Yan Zhang, and Jong Hyuk Park

Prediction and Key Computer Programming of Mechanical Properties of Hot Rolled Plate Based on BP Neural Network
Qinghua Zou, Li Chen, Naixue Xiong, Shengzhong Zou, and Chuanbing Wang

The 3rd International Workshop on Ubiquitous UnderWater Sensor Network (UUWSN-09)

Session B81: Ubiquitous UnderWater Sensor Network (Chair: Changhwa Kim)

Efficient UDD Architecture for Underwater Wireless Acoustic Sensor Network
Seung-Joo Lee, Jung-II Namgung, and Soo-Hyun Park

An Underwater Communication Model Using TMS320C6416 DSK
Tae Hee Won, Jun-Ho Jeon, and Sung-Joon Park

Neighbor Nodes Aware MAC Scheduling Scheme in Underwater Acoustic Sensor Networks
Nam-Yeol Yan, Hur-Jin Cho, and Soo-Hyun Park

Design of OFDM System for High Speed Underwater Communication
Jeong-woo Han, Se-young Kim, Ki-man Kim, Seung-yong Chun, and Kwon Son
The 2009 International Workshop on Ubiquitous Network Computing (UNC-09)

Session B91: Ubiquitous Network Systems (Chair: Min Chen)
- An Improved Chinese Segmentation Algorithm Based on New Dictionary Construction
  Yan Niu and Lala Li
- Network Bandwidth Allocation Based on QoS in iSCSI OSD Storage System
  Yong Su
- Wireless ECG Monitoring System Based on OMAP
  Jing Liang and Yinqin Wu

Session B92: Network Algorithms (Chair: Min Chen)
- Routing in 802.11-based Wireless Mesh Networks
  Hao Zimian, Wei Xiong, Xiong Naixue, and He Yuhan
- An Improved SPECK Algorithm with Bit Plane Lifting and the Optimal Single Value Prediction
  Xubing Zhang, Yong Zhu, and Jianhong Fu
- A Research on the Self-Applicable Network Virtual Storage Data Distribution Arithmetic
  Wei Xiong, Xu Xianbin, Xiong Naixue and He Ruhan

Session B93: Ubiquitous Multimedia Computing (Chair: Min Chen)
- Mobile Agent-based Data Gathering for Web Image Retrieval
  Ruhan He, Yong Zhu, Naixue Xiong, Wei Zhan, and Yanjun Zhao
- A Videoconference System on the Campus Networks Based on H.323 Protocol
  Yean Yin, WenBing Lu, and Ke Zhang
- Edge Detection Based on Fast Adaptive Mean Shift Algorithm
  Yong Zhu, Ruhan He, Naixue Xiong, Pu Shi, and Zhiguang Zhang

Session B94: Ubiquitous Applications (Chair: Min Chen)
- Implementation of Unlimited Integer
  Kong Weiguang, Zhu Yong, and Wang Yuan
- Ride Comfort Simulation Based on the Vibration Characteristics of the Two-Mass System of Vehicle Body and Wheels
  H. X. Yang and F. M. Chen
- An Analysis and Hierarchical Decomposition for HAMs
  Du Xiaoqin, Li Qinghua, and Han Jianjun
- Computer Calculation and Plotting on Dynamical Phase Diagrams of Carbon Steel
  Qing-hua Zou, Li Chen, Naixue Xiong, Sheng-zhong Zou, and Chuan-bing Wang
- A Survey on Fault-Tolerance in Distributed Network Systems
  Naixue Xiong, Yan Yang, Ming Cao, Jing He, and Lei Shu

The 2009 International Workshop on Ubiquitous Computing, Management, and Embedded Applications in Healthcare: Strategies and Application Case Studies (UbiHealth-09)

Session BA1: Ubiquitous Computing, Management, and Embedded Applications in Healthcare (Chair: Alexandre Sztajnberg)
- A Hybrid Computational Approach for the Prediction of Small Non-coding RNAs from Genome Sequences
  Ning Yu, Kyu Hong Cho, Qiang Cheng, and Rafael A. Tesorero
- A New Computational Tool for the Post Session Analysis of the Prepulse Inhibition Test in Neural Science
  Hongbo Zhou, Hong-Ju Yang, Haiyun Xu, and Qiang Cheng
- WiFi-based Telemedicine System: Signal Accuracy and Security
  Huey Qu, Jie Cheng, Qiang Cheng, and Le Yi Wang
- Fast Fusion of Medical Images Based on Bayesian Risk Minimization and Pixon Map
  Hongbo Zhou, Qiang Cheng, and Mehdi Zargham
- Using Discovery and Monitoring Services to Support Context-aware Remote Assisted Living Applications
  André Luiz B. Rodrigues, Izabela C. Gomes, Leila N. Bezerra, Alexandre Sztajnberg, Sérgio T. Carvalho, et al.
C. SESSIONS AND PAPERS IN PASSAT-09

The 2009 IEEE International Conference on Privacy, Security, Risk and Trust (PASSAT-09)

Keynote: Privacy, Security, Risk and Trust in Service-Oriented Environments (Chair: Jianhua Ma)
Prof. Stephen S. Yau, Arizona State University, USA

Keynote: Elections with Practical Privacy and Transparent Integrity (Chair: Justin Zhan)
Dr. David Chaum, Board of Directors of DigiCash Inc., USA

Session C11: Privacy and Security I (Chair: Boi Faltings)

Noise Injection for Search Privacy Protection
Shaozhi Ye, Felix Wu, Raju Pandey, and Hao Chen
Privacy-preserving Bayesian Network for Horizontally Partitioned Data
Saeed Samet and Ali Miri
Privacy-preserving Multi-agent Constraint Satisfaction
Thomas Leauté and Boi Faltings
FaceCloak: An Architecture for User Privacy on Social Networking Sites
Wanying Luo, Qi Xie, and Urs Hengartner

Session C12: Privacy and Security II (Chair: Helen Y. Tang)

Adapting Privacy-Preserving Computation to the Service Provider Model
Florian Kerschbaum
Anonymity, Privacy, Onymity, and Identity: A Modal Logic Approach
Yasuyuki Tsukada, Ken Mano, Hideki Sakurada, and Yoshinobu Kawabe
Privacy-Enhanced Event Scheduling
Benjamin Kellermann and Rainer Böhme
Privacy Management, the Law & Business Strategies: A Case for Privacy Driven Design
Mary-Anne Williams

Session C13: Privacy and Security III (Chair: Steve Yau)

t-plausibility: Semantic Preserving Text Sanitization
Wei Jiang, Mummoorthy Murugesan, Chris Clifton, and Luo Si
Policy-Based Malicious Peer Detection in Ad Hoc Networks
Wenjia Li, Anupam Joshi, and Tim Finin
Success Likelihood of Ongoing Attacks for Intrusion Detection and Response Systems
Wael Kanoun, Nora Cuppens-Boulahia, Frederic Cuppens, Samuel Dubus, and Antony Martin

Session C14: Risk and Trust I (Chair: Boi Faltings)

Tuning Evidence-Based Trust Models
Eugen Staab and Thomas Engel
Trust Is in the Eye of the Beholder
Dimitri DeFigueiredo, Earl Barr, and S. Felix Wu
A Trust-based Multiagent System
Richard Seymour and Gilbert Peterson
Towards Automating Social Engineering Using Social Networking Sites
Markus Huber, Stewart Kowalski, Marcus Nohlberg, and Simon Tjoa
Social Inference Risk Modeling in Mobile and Social Applications
Sara Motahari, Sotirios Ziaavras, Mor Naaman, Mohamed Ismail, and Quentin Jones

The 2009 International Symposium on Secure Computing (SecureCom-09)

Session C21: Privacy and Security I (Chair: Mary-Anne Williams)

Anonymity Properties of Stored or Transmitted Data Taken from Bluetooth Scans
David Evans and Robert H. Warren
Privacy Requirements in Vehicular Communication Systems
Florian Schaub, Zhendong Ma, and Frank Kargl
A Framework to Balance Privacy and Data Usability Using Data Degradation
Harold van Heerde, Maarten Fokkinga, and Nicolas Anciaux

Session C22: Privacy and Security II (Chair: Martin Neubauer)

A Lattice-Based Privacy Aware Access Control Model
Kambiz Ghazinour, Maryam Majedi, and Ken Barker
Modelling of Pseudonymity under Probabilistic Linkability Attacks
Martin Neubauer
Privacy-Preserving Integrity-Assured Data Aggregation in Sensor Networks
Session C23: Privacy and Security III (Chair: Lan Wang)
User-centric Privacy Framework: Integrating Legal, Technological and Human Aspects into User-Adapting Systems
Victor Manuel Garcia-Barrios
An Empirical Study on Privacy and Secure Multi-party Computation using Exponentiation
I-Cheng Wang, Chih-Hao Shen, Kang Chen, Tsan-sheng Hsu, Chuan-Jung Liau, and Da-Wei Wang
A Hybrid Enforcement Model for Group-centric Secure Information Sharing
Ram Krishnan and Ravi Sandhu
A Framework for Enforcing Constrained RBAC Policies
Jason Crampton and Hemanth Kambhammettu

Session C24: Privacy and Security IV (Chair: Chris Clifton)
Guarantee-based Access Control
Mohammed Hussain and David B. Skillicorn
Integrity Verification of Outsourced XML Databases
Ruimin Liu and Hui (Wendy) Wang
Goal-Oriented Software Security Engineering: The Electronic Smart Card Case Study
Riham Hassan, Mohamed Eltoweissy, Shawn Bohmer, and Sherif El-Kassas
A Unified Approach to Intra-Domain Security
Craig A. Shue, Andrew J. Kalafut, and Minaxi Gupta

Session C25: Risk and Trust I (Chair: Craig Shue)
A Low-cost Green IT Design and Application of VHSIP Based on Virtualization Technology
Chih-Hung and Chang
Improving Host Profiling with Bidirectional Flows
Pavel Minarik, Jan Vykopal, and Vojtech Krmicek
Nearby-Friend Discovery Protocol for Multiple Users
Shashwat Raizada, Goutam Paul, and Vineet Pandey
The Insider Threat Security Architecture
Ghassan Jabbour and Daniel A. Menasce

Session C26: Risk and Trust II (Chair: Kenji Taguchi)
Reputation-Based Ontology Alignment for Autonomy and Interoperability in Distributed Access Control
Daniel Trivellato, Fred Spiessens, Nicola Zannone, and Sandro Etalle
How to overcome the 'Trusted Node Model' in Quantum Cryptography
Peter Schartner and Stefan Rass
The Influence of Personalities upon the Dynamics of Trust and Reputation
Mark Hoogendoorn and S. Waqar Jaffry
Large Online Social Footprints - An Emerging Threat
Danesh Irani, Steve Webb, Kang Li, and Calton Pu

Session C27: Risk and Trust III (Chair: Ravi Sandhu)
A Case Study of Individual Trust Development in Computer Mediated Collaboration Teams
Xusen Cheng, Linda Macaulay, and Alex Zarrifs
On the Feasibility of Remote Attestation for Web Services
John Lyle and Andrew Martin
Verifying the Interplay of Authorization Policies and Workflow in Service-oriented Architectures
Michele Barletta, Silvio Ranise, and Luca Vigano
ProActive Caching: Generating Caching Heuristics for Business Process Environments
Mathias Kohler, Achim D. Brucker, and Andreas Schaad

The 2009 International Symposium on Privacy and Security Applications (PSA-09)

Session C31: Privacy and Security I (Chair: Dale Lindskog)
Combining Attribute-Based and Access Systems
Behzad Malek and Ali Miri
Analysis of the GMPLS Control Plane Security
Clement Avonote, Pavol Zavarsky, and Dale Lindskog
Diversity in Network Attacker Motivation: A Literature Review
Mark Rounds and Norman Pendgraft

Session C32: Privacy and Security II (Chair: Peidong Zhu)
Emergency Privacy Measures
Hendrik Johannes Gerhardus and Oberholzer
Designing Privacy for Scalable Electronic Healthcare Linkage
Anthony Stell, Richard Sinnott, Oluwafemi Ajayi, and Jipu Jiang
Routing Policy Conflict Detection without Violating ISP's Privacy
Ning Hu, Peidong Zhu, Huayang Cao, and Kan Chen
Practical Values for Privacy
Benjamin Wasser and Justin Zhan

Session C33: Privacy and Security III (Chair: Mark Rounds)
Phishpin: An Identity-Based Anti-phishing Approach
Hicham Tout and William Hafner
Security Implications of Virtualization: A Literature Study
André van Cleeoff, Wolter Pieters, and Roel J. Wieringa
ViDPSec Visual Device Pairing Security Protocol
Dimitris Zisiadis, Spyros Kopsidas, and Leandros Tassiulas
Lightweight IDS Based on Features Selection and IDS Classification Scheme
Safaaz Zaman and Fakhri Karray

Session C34: Risk and Trust (Chair: Shi-Cho Cha)
A Study of the Methods for Improving Internet Usage Policy Compliance
Mandeep Saran and Pavol Zavarsky
Shi-Chop Cha, Li-Ting Lin, and Bo-Chen Yu
An Efficient Framework for IT Controls of Bill 198 (Canada Sarbanes-Oxley) Compliance by Aligning COBIT 4.1, ITIL v3 and ISO/IEC 27002
Zhitoa Huang, Pavol Zavarsky, and Ron Ruhl
Ceremonies Formal Analysis in PKI's Context
Jean Everson Martina, Tulio Cicero Salavaro de Souza, and Ricardo Felipe Custodio

The 2009 International Workshop on Software Security Process (SSP-09)

Session C41: Software Engineering for Security (Chair: Corrado Aaron Visaggio)
Specification of Fair Data Practice Principles Using Privacy Policy Languages
Girma Nigusse, Bart De Decker, and Vincent Naessens
Limiting Private Data Exposure in Online Transactions - A User-Based Online Privacy Assurance Model
Alaa El Masri and João Pedro Sousa
A Privacy Framework for Personal Self-Improving Smart Spaces
Knowledge Acquisition and Insider Threat Prediction in Relational Database Systems
Qussai Yaseen and Brajendra Panda

Session C42: Data Privacy (Chair: Brajendra Panda)
Activity and Artifact Views of a Secure Software Development Process
Muhammad Umtair Ahmed Khan and Mohammad Zulkernine
An AHP-based Framework for Quality and Security Evaluation
Valentina Casola, Anna Rita Fasolino, Nicola Mazzocca, and Porfirio Tramontana
Assurance Process for Large Open Source Code Bases
Claudio Agostino Ardagna, Ernesto Damiani, Massimo Banzi, and Fulvio Frati

Session C43: Risk Management (Chair: Valentina Casola)
Managing Risk of IT Security Outsourcing in the Decision-making Stage
Samuel Oladapo, Pavol Zavarsky, Andy Ignor, Ron Ruhl, and Dale Lindskog
Risk Perceptions of Information Security: A Measurement Study
Fariborz Farahmand, Melissa Dark, Sydney Liles, and Brandon Sorge
Managing Risks on Critical IT Systems in Public Service Organizations
Yeni Yuqin and Li Helgesson

Session C44: Trust and Security Models (Chair: Gerardo Canfora)
A Dynamic Trust Evaluation Model on C2C Marketplaces
Yun Yang and Junhua Chen
Threat Modeling for CSRF Attacks
Xiaoli Lin, Pavol Zavarsky, Ron Ruhl, and Dale Lindskog
A Novel Approach to DRM Systems
Franco Frattolillo, Federica Landolfi, and Fiammetta Marulli
Worm Path Identification Using Visualization System
Seiji Shibaguchi, Yuki Nakayama, and Ken-ichi Okada
A Simulation of Various Variable Hacker Populations
Norman Pendegraft and Mark Rounds
Code Obfuscation Using Pseudo-random Number Generators
John Aycock and Juan Manuel Gutierrez Cardena
Misuse Cases + Assets + Security Goals
Takao Okubo, Kenji Taguchi, and Nobukazu Yoshioka
Effects of Individual and Organization Based Beliefs and the Moderating Role of Work Experience on Insiders’ Good Security Behaviors
Burcu Bulgurcu, Hasan Cavusoglu, and Izak Benbasat
D. Sessions and Papers in SocialCom-09

The 2009 IEEE International Conference on Social Computing (SocialCom-09)

Keynote: Network Analysis and Visualization for Understanding Social Computing (Chair: Alex Pentland)
Prof. Ben Shneiderman, University of Maryland, USA

Keynote: Social Computing Applications and Trends (Chair: Alex Pentland)
Dr. Fei-Yue Wang, the Institute of Automation, CAS, China

Session D11: Social Computing I (Chair: Justin Zhan)
Edge Anonymity in Social Network Graphs
Lijie Zhang and Weining Zhang
Guanxi in the Chinese Web
Valerie King, Louis Yu, and Yan Zhuang
Anomaly Detection in Dynamic Social Systems Using Weak Estimators
Justin Zhan, B. John Oommen, and Johanna Crisostomo
Structure of Neighborhoods in a Large Social Network
Alina Stoica and Christophe Prieur

Session D12: Social Computing II (Chair: Ben Shneiderman)
Deriving Expertise Profiles from Tags
Adriana Budura, Daniela Bourges-Waldegg, and James Riordan
Probabilistic Generative Models of the Social Annotation Process
Said Kashoob, James Caverlee, and Elham Khabiri
Detecting Communities from Bipartite Networks Based on Bipartite Modularities
Tsuyoshi Murata
Visually and Acoustically Exploring the High-Dimensional Space of Music
Lukas Bossard, Michael Kuhn, and Roger Wattenhofer

Session D13: Social Computing III (Chair: Jenny Preece)
A Semantic Imitation Model of Social Tag Choices
Wai-Tat Fu, Thomas G. Kannampallil, and Ruogu Kang
A Visual Interface for Social Information Filtering
John O’Donovan, Brynjar Gretarsson, Svetlin Bostandjiev, Tobias Hollerer, and Barry Smyth
Equilibria and Efficiency Loss in Games on Networks
Ranking Comments on the Social Web
Chiao-Fang Hsu, Elham Khabiri, and James Caverlee

Session D14: Social Computing IV (Chair: Gholamali Shoja)
Structure of Heterogeneous Networks
Rumi Ghosh and Kristina Lerman
Online User Activities Discovery Based on Time Dependent Data
Dan Hong and Vincent Y. Shen
Socio-semantic Dynamics in a Blog Network
Jean-Philippe Cointet and Camille Roth
The Formation of Task-Oriented Groups: Exploring Combat Activities in Online Games
Yun Huang, Mengxiao Zhu, Jing Wang, Nishith Pathak, Cuihua Shen, Brian Keegan, Dmitri Williams, and Noshir Contractor

Session D15: Social Computing V (Chair: Yoshifumi Masunaga)
Incremental SVM Model for Spam Detection on Dynamic Email Social Networks
Chi-Yao Tseng and Ming-Syan Chen
Evaluating the Impact of Attacks in Collaborative Tagging Environments
Maryam Ramezani, J. J. Sandvig, Tom Schmoller, Jonathan Gemmell, Bamshad Mobasher, and Robin Burke
Community Computing: Comparisons between Rural and Urban Societies Using Mobile Phone Data
Nathan Eagle, Yves-Alexandre de Montjoye, and Luis M. A. Bettencourt
Social Synchrony: Predicting Mimicry of User Actions in Online Social Media
Munmun De Choudhury, Hari Sundaram, Ajita John, and Doree Duncan Seligmann

The 2009 International Symposium on Social Intelligence and Networking (SIN-09)

Session D21: Social Intelligence and Networking I (Chair: Huan Liu)
Representing Small Group Evolution
Whitman Richards and Nicholas Wormald
Private Buddy Search: Enabling Private Spatial Queries in Social Networks
Ali Khoshgozaran and Cyrus Shahabi

Multi-level Cellular Automata & Social Dynamics
Jan J. Koenderink and Whitman Richards

Extended Social Tags: Identity Tags Meet Social Networks
Sonia Lajmi, Johann Stan, Hakim Hacid, Eldé Egyed-Zsigmond, and Pierre Maret

Session D22: Social Intelligence and Networking II (Chair: Kai Fischbach)

Size Matters: Variation in Personal Network Size, Personality and Effect on Information Transmission
Yu-En Lu, Sam Roberts, Pietro Lio, Robin Dunbar, and Jon Crowcroft

TagRec: Leveraging Tagging Wisdom for Recommendation
Tom Chao Zhou, Hao Ma, Irvin King, and Michael R. Lyu

Development and Validation of an Agent-Based Simulation Model of Juvenile Delinquency
Tibor Bosse, Charlotte Gerritsen, Michel Klein, and Frank M. Weerman

Using Hierarchical Bayesian Models to Learn About Reputation
Philip Hendrix, Ya'akov Gal, and Avi Pfeffer

Web Science 2.0: Identifying Trends through Semantic Social Network Analysis
Peter A. Gloor, Jonas Krauss, Stefan Nann, Kai Fischbach, and Detlef Schoder

Session D23: Social Intelligence and Networking III (Chair: Wai-Tat Fu)

Social Awareness Concepts to Support Social Computing
Andry Rakotonirainy, Seng W. Loke, and Patricia Obst

An Agent-Based Approach to Modeling and Analysis of Safety Culture in Air Traffic
Alexei Sharponskhyyk and Sybert Stroeve

Clustering Signature in Complex Social Networks
Ueli Peter and Tomas Hruz

Inferring the Maximum Likelihood Hierarchy in Social Networks
Arun S. Maiya and Tanya Y. Berger-Wolf

Is the Crowd’s Wisdom Biased? A Quantitative Analysis of Three Online Communities
Vassilis Kostakos

Session D24: Social Intelligence and Networking IV (Chair: Muthucumaru Maheswaran)

Social Learning Applications in Resource Constrained Networks
Ali Saidi, Mahesh V. Tripunitara, and Mojdeh Mohtashemi

Analysis of a Location-Based Social Network
Nan Li and Guanling Chen

Modeling User Perception of Interaction Opportunities for Effective Teamwork
Ece Kamar, Ya'akov Gal, and Barbara J. Grosz

Finding Cohesive Subgroups and Relevant Members in the Nokia Friend View Mobile Social Network
Alvin Chin

Capturing On-Line Social Network Link Dynamics Using Event-Driven Sampling
Dan Corlette and Frank Shipman III

Session D25: Social Intelligence and Networking V (Chair: Andry Rakotonirainy)

How Did You Get to Know That? A Traceable Word-of-Mouth Algorithm
Manuel Cebrián, Enrique Frias-Martínez, Heath Hohwald, Ruben Lara, and Nurnia Oliver

A Second-Order Markov Random Walk Approach for Collaborative Filtering
Su Chen, Tieqian Luo, and Tingshao Zhu

Towards Demarcation and Modeling of Small Sub-Communities / Groups in P2P Social Networks
Georg Groh and Verena Rappel

Extracting Multi-facet Community Structure from Bipartite Networks
Kenta Suzuki and Ken Wakita

Session D26: Social Intelligence and Networking VI (Chair: Hao Wang)

The Use of Online Videos in the 2008 U.S. Congressional Elections
Eni Mustafaraj, Panagiotis Takis Metaxas, and Catherine Grevet

The Social Behaviors of Experts in Massive Multiplayer Online Role-Playing Games
David Haffaker, Jing (Annie) Wang, Jeffrey Treem, Muhammad A. Ahmad, Lindsay Fullerton, Marshall Scott Poole, et al.

First Steps to Netviz Nirvana: Evaluating Social Network Analysis with NodeXL
Elizabeth Marie Bonsignore, Cody Dunne, Dana Rotman, Marc Smith, Tony Capone, Derek L. Hansen, and Ben Shneiderman

Mining for Gold Farmers: Automatic Detection of Deviant Players in MMOGs
Muhammad Aurangzeb Ahmad, Brian Keegan, Jaideep Srivastava, Dmitri Williams, and Noshir Contractor

Session D27: Social Intelligence and Networking VII (Chair: Robert Kremer)

Surfing a Web of Trust: Reputation and Reciprocity on CouchSurfing.com
Debra Lauterbach, Hung Truong, Tanuj Shah, and Lada Adamic

Virtually There: Exploring Proximity and Homophily in a Virtual World
Yun Huang, Cuihua Shen, Dmitri Williams, and Noshir Contractor
The Altruistic Searcher
Barry Smyth, Maurice Coyle, and Peter Briggs
On the Design of Collective Applications
Jon Dron and Terry Anderson
Inferring Unobservable Inter-community Links in Large Social Networks
Heath Hohwald, Manuel Cebrián, Arturo Canales, Rubén Lara, and Nuria Oliver

Session D28: Social Intelligence and Networking VIII (Chair: Michael A. Stefanone)
Social Relationship Identification: An Example of Social Query
Christopher P. Diehl, Jaime Montemayor, and Mike Pekala
metaViz: Visualizing Computationally Identified Metaphors in Political Blogs
Eric P. S. Baumer, Jordan Sinclair, David Hubin, and Bill Tomlinson
Implementing Social Norms Using Policies
Robert Kremer
Usable Privacy Controls for Blogs
Michael Hart, Claude Castille, Rob Johnson, and Amanda Stent
Feedback Loops of Attention in Peer Production
Fang Wu, Dennis M. Wilkinson, and Bernardo A. Huberman
New Media Use in Context: Environmental Cues and Online Self-Disclosure via Weblogs
Michael A. Stefanone, Chyng-Yang Jang and Nathan Claes

Session D29: Social Intelligence and Networking IX (Chair: Noshir Contractor)
SpamClean: Towards Spam-Free Tagging Systems
Ennan Zhai, Huaping Sun, Sihan Qing, and Zhong Chen
Social Authentication Protocol for Mobile Phones
Bijan Soleymani and Muthucumaru Maheswaran
Modeling Ethno-religious Conflicts as Prisoner’s Dilemma Game in Graphs
Lingzhi Luo, Nilanjan Chakraborty, and Katia Sycara

Session D2A: Social Intelligence and Networking X (Chair: Hikaru Yamamoto)
Whither the Experts? Social Affordances and the Cultivation of Experts in Community Q&A Systems
Howard T. Welser, Eric Gleave, Vladimir Barash, Marc Smith, and Jessica Meckes
The Power of Grassroots Influentials: The Optimal Heterophily between Sender and Receiver
Hikaru Yamamoto and Naoko Matsumura
A Model of Tacit Knowledge and Action
Ya’akov Gal, Rajesh Kasturiarangan, Avi Pfeffer, and Whitman Richards
iKnow Where You Are
Kalyan Subbu, Ning Xu, and Ram Dantu
Incorporating Participant Reputation in Community-Driven Question Answering Systems
Liangjie Hong, Zaihan Yang, and Brian D. Davison
Churn Prediction in MMORPGs: A Social Influence Based Approach
Jaya Kawale, Aditya Pal, and Jaideep Srivastava

Session D2B: Social Intelligence and Networking XI (Chair: Whitman Richards)
Expertise Modeling and Recommendation in Online Question and Answer Forums
Saratna Budalakoti, David DeAngelis, and K. Suzanne Barber
Quantifying Utility and Trustworthiness for Advice Shared on Online Social Media
Sai T. Moturu, Jian Yang, and Huan Liu
A Language of Life: Characterizing People Using Cell Phone Tracks
Alexy Khrabrov and George Cybenko

The 2009 International Symposium on Social Computing Applications (SCA-09)

Session D31: Social Computing Applications I (Chair: Sean P. Goggins)
On the Synergy of Conflict and Collective Creativity in Open Innovation Socio-technical Ecologies
Levent Yilmaz
Investigating User Experience of Online Communities: The Influence of Community Type
Vivian Hsu-Hua Chen and Henry Been-Lirn Duh
Enabling Video-Blogging without Relying on External Service-Providers
Jasus Bross, Janosch Oppermann, and Christoph Meinel
Improving Interobserver Reliability by Artificial Intelligence Techniques in Behavioural Research
Arjen van Alphen, Tibor Bosse, Catholijn M. Jonker, and Francien Koeman

Session D32: Social Computing Applications II (Chair: Tiejian Luo)
Health Insurance Reform in an Experimental Market: Human Subjects, Agents Combined to Study Complex Regulatory Reform
Proposals
Stephen J. Rassenti and Carl A. Johnston
Social Interaction History: A Framework for Supporting Exploration of Social Information Spaces
Indratmo and Julita Vassileva
Social Network Analysis and Geotemporal Reasoning in a Web 3.0 World
Jans Aasman
Emergence of Social Norms in Complex Networks
Yu Zhang and Jason Leezer
Local Semi-linear Regression for River Runoff Forecasting
Fan Min and Xindong Wu

Session D33: Social Computing Applications III (Chair: Yu Zhang)

Centrality and Power among Website Users: A Social Network Analysis Application
G. Michael McGrath
Introducing Electronic Child Records, Balancing Personal Interests, System Performance, and Social Values
Guido van Heck, Ilumar Sharon, Paulus Kampert, and Jan van den Berg
Towards an Introduction to Collaborative Filtering
Jia Zhou and Tiejian Luo
Collaborative Mining in Multiple Social Networks Data for Criminal Group Discovery
Amin Milani Fard and Martin Ester
Web Page Classification Using Social Tags
Sadegh Aliakbari, Hassan Abolhassani, Hossein Rahmani, and Behrouz Nobakht

Session D34: Social Computing Applications IV (Chair: Sangki (Steve) Han)

Davis Social Links or: How I Learned to Stop Worrying and Love the Net
Matt Spear, Xiaoming Lu, and S. Felix Wu
A Stigmergy Approach for Open Source Software Developer Community Simulation
Xiaohui Cui, Justin Beaver, Laura Pullum, Jim Treadwell, and Thomas Potok
Personality in Social Group Dynamics
Rui Prada, Samuel Ma, and Maria Augusta Nunes
Lending Behavior and Community Structure in an Online Peer-to-peer Economic Network
Katherine Ann Krumme and Sergio Herrera
Temporal Issue Trend Identifications in Blogs
Il-Chul Moon, Young-Min Kim, Hyun-Jong Lee, and Alice H. Oh

Session D35: Social Computing Applications V (Chair: Dauw-Song Zhu)

Gaming on and off the Social Graph: The Social Structure of Facebook Games
Ben Kirman, Shaun Lawson, and Conor Linehan
The Socio-cultural Factors Influencing Online Female Consumers in Saudi Arabia
Khulood Rambo, Kecheng Liu, and Keiichi Nakata
Experience Search: Accessing the Emergent Knowledge from Annotated Blog Postings
Yong-Jin Han, Jeong-Woo Son, Hyun-Jae Song, Hee-Geun Yoon, Jae-Ahn Lee, Sang-Do Lee, Kye-Sung Kim, et al.
Adaptive Tourism Modeling and Socialization System
Bruno Coelho, Constantino Martinez, and Ana Almeida
Open Editing Algorithm: A Collaborative News Promotion Algorithm Based on Users’ Voting History
Joonseong Ko, Kanghak Kim, Ohyeon Kweon, Jongwook Kim, Young-rin Kim, and Sangki “Steve” Han

Session D36: Social Computing Applications VI (Chair: Levent Yilmaz)

Designing Social Computing using Traditions of Symbolism, Personalization, and Gift Culture
Yin He and Thecla Schiphorst
Social Ability in Online Groups: Representing the Quality of Interactions in Social Computing Environments
Sean P. Goggins, James Laffey, and Krista Gulyen
A Study of Information Diffusion over a Realistic Social Network Model
Andrea Aponi, Karthik Channakeshava, Lisa Durbeck, Maleq Khan, Chris Kuhlman, Bryan Lewis, and Samantha Swarup
Modeling Human, Social, Cultural or Behavioral Events for Real World Applications: Results and Implications from the State Stability Project
Anne Russell and Mark Clark

Session D37: Social Computing Applications VII (Chair: Dale Ganley)

System Theoretic Formalization of Social Group Processes and Optimal Evidence-Indicator Discovery
Payam Saisan, Anne Russell, Mark Clark, and Stephen Krotosky
Co-located Many-player Gaming on Large High-resolution Displays
David Machaj, Christopher Andrews, and Chris North
Analyzing Enterprise Social Media Networks
Marc Smith, Derek L. Hansen, and Eric Gleave
Mining and Analyzing Multi-relational Social Networks
Victor Stroele, Jonice Oliveira, Geraldo Zimbriao, and Jano M. Souza
Session D38: Social Computing Applications VIII (Chair: Vivian Hsueh-Hua Chen)

A Survey of Human Computation Systems
Man-Ching Yuen, Ling-Jyh Chen, and Irwin King

Tag Sense Disambiguation for Clarifying the Vocabulary of Social Tags
Kanggyo Lee, Hyunwoo Kim, Hyoupl Shin, and Hyoung-Joo Kim

Predicting Interests of People on Online Social Networks
Apoorv Agarwal, Owen Rambow, and Nandini Bhardwaj

Will Networking Nerds Pay for Stuff That Matters? The Relationship between Social Networks and Subscriptions in Virtual Communities
Melanie Bernier and Dale E. Ganley

Names of Our Lives
Benjamin M. Gross

Session D39: Social Computing Applications IX (Chair: Dauw-Song Zhu)

Using Qtag to Extract Dominant Public Opinion in Very Large-Scale Conversation
Sung Eob Lee, Taeksoo Chun, and "Steve" Sangki Han

Study on Collective Memory in the Blogosphere
Young Sik Kim, Kibeom Lee, and "Steve" Sangki Han

Personal Management of Social Networks Data
Mauro San Martin and Claudio Gutierrez

The Effect of Trust and Perceived Risk on Consumers’ Online Purchase Intention
Dauw-Song Zhu, Gwendolyn Sneed O’Neal, Zai-Chih Lee, and Yen-Hsun Chen

The 2009 International Workshop on Social Networks Mining and Analysis for Business Applications (SNMABA-09)

Session D41: Social Networks Mining and Analysis for Business Applications I (Chair: I-Hsien Ting)

Ego-centric Network Sampling in Viral Marketing Applications
Huayu (Harry) Ma, Steven Gustafson, Abha Motra, and David Bracewell

Integration of User Experiences to Advancement of B2B-Software-on-Demand Systems
Eva-Maria Schwartz

Application of New A priori Algorithm MDNC to Exchange Traded Fund
Huang Ching-Fen, Tai Wen-Chih, and Chen An-Pin

Enhancing Airline Customer Relationship Management Data by Inferring Ties between Passengers
Michael Farrugia and Aaron Quigley

Session D42: Social Networks Mining and Analysis for Business Applications II (Chair: I-Hsien Ting)

The Benefits of Synchronized Genuine Smiles in Face-to-face Service Encounters
Kyunghee Kim, Micah Eckhardt, Nandli Bugg, and Rosalind W. Picard

A Proposal of Discovering User Interest by Support Vector Machine and Decision Tree on Document Classification
Loc Nguyen

Analyzing Multi-source Social Data for Extracting and Mining Social Networks
I-Hsien Ting, Hui-Ju Wu, and Pei-Shan Chang

Session D43: Social Networks Mining and Analysis for Business Applications III (Chair: I-Hsien Ting)

A Study of Co-relational Personalities of the Social Network in Organization
Wei-Lun Chang and Sian-Ting Lin

Information Retrieval in Wikis Using an Ontology
Carlos Miguel Tobar, Alessandro Santos Germer, Juan Manuel Adán-Coello, and Ricardo Luis de Freitas

The Effect of Network Position and Relationship Quality on Organizational Performance-The ABW Family
Ting-Lin Lee and Chih-Wei Lin

The 2009 International Workshop on Social Behavior in Music (SBM-09)

Session D51: Social Behavior in Music I (Chair: Gualtiero Volpe)

Toward a Real-Time Automated Measure of Empathy and Dominance
Giovanna Varni, Antonio Camorri, Paolo Coletta, and Gualtiero Volpe

Concepts, Technology, and Assessment of the Social Music Game ‘Sync-in-Team’
Marc Lemon, Michael Deney, Micheline LeSaffre, Leon van Noorden, and Dirk Moelants

Reinforcement Learning of Listener Response for Mood Classification of Audio
Jack Stockholm and Philippe Pasquier
Session D52: Social Behavior in Music II (Chair: Giovanna Varni)
Dynamic Social Interaction in a Collective Mobile Music Performance
Koray Tahiroglu
NetBeat and Net4Tet – networked Performance Instruments for Electroacoustic Music Students
Arne Eigenfeldt
Demo from the FP7 EU-ICT SAME Project

The 2009 International Workshop on Social Computing in Education (WSCE-09)

Session D61: Social Computing in Education I (Chair: Irwin King)
Invited Talk: Social Media Tools and Platforms in Learning Environments - Present and Future
Bebo White, Stanford Linear Accelerator Center (SLAC), USA
Let’s Meet: Integrating Social and Learning Worlds
Melody Siadaty, Dragan Gasevic, and Marek Hatala
SCI: Towards a Social Collaborative Integrated Development Environment
Hani Bani-Salameh, Clinton Jeffery, and Jafar Al-Gharaibeh
Sharing Application Sessions for Peer-to-Peer Learning
Oscar Ardaiz, Luis Manuel Diaz de Cerio, Jose Andres Del Campo, and Ruben Mondejar

Session D62: Social Computing in Education II (Chair: Irwin King)
Web2.0 Tools to Support the Instructional Method “Thinking Actively in a Creative Environment”
Oscar Ardaiz Villanueva, Xabier Nicuesa Chacón, Oscar Brene Artazcoz, Maria Luisa Sanz de Acedo Lizarraga, et al.
Research for Collaborative Knowledge Management Based on Semantic Wiki Technology
Junjie Wang, Qian Mo, and Dongxia Mei
Online Presence in Adaptive Learning on the Social Semantic Web
Jelena Jovanović, Dragan Gašević, Milan Stanković, Zoran Jeremić, and Melody Siadaty

Session D63: Social Computing in Education III (Chair: Irwin King)
Designing to Attract Participation in a Niche Community for Women in Science & Engineering
Zina Sahib and Julita Vassileva
Design of a Platform of Popular Science Education Based on Social Computing
Fang Wang and Qian Mo
Spurring Design Thinking through Educational Weblogging
Justus Bross, Ahmet Emre Acar, Patrick Schilf, and Christoph Meinel
A Decision Support System for Institutional Research Management in Higher Education: Data Mining to Determine Research Focus, Intensity and Synergy
Kobus Ehlers, Malan Joubert, Johann Kinghorn, and Arnold van Zyl
Approach for Name Ambiguity Problem Using a Multiple-layer Clustering
Wenrong Jiang, Anbao Wang, Cuihong Wu, Jian Chen, and Jihong Yan
An Empirical Study of Research Collaboration Using Social Network Analysis
Yu-Ling Luo and Chia-Hao Hsu

The 2009 International Workshop on Social Computing with Mobile Phones & Sensors: Modeling, Sensing and Sharing (SCMPS-09)

Session D71: Social Computing with Mobile Phones and Sensors I (Chair: Marta Gonzales)
Invited Talk on Workshop on Social Computing with Mobile Phones & Sensors (I)
Ambulation: A Tool for Monitoring Mobility Patterns over Time Using Mobile Phones
Jason Ryder, Brent Longstaff, Sasank Reddy, and Deborah Estrin
The Importance of Data Collection for Modelling Contact Networks
Eiko Yoneki

Session D72: Social Computing with Mobile Phones and Sensors II (Chair: Anmol Madan)
Invited Talk on Workshop on Social Computing with Mobile Phones & Sensors (II)
Investigating Bimodal Clustering in Human Mobility
James P. Bagrow and Tal Koren
Mining Mobility Behavior from Trajectory Data
Fosca Giannotti, Mirco Nanni, Dino Pedreschi, Chiara Renso, and Roberto Trasarti
The Impact of Human Mobility on Spatial Disease Dynamics
V.V. Belik, T. Geisel, and D. Brockmann

Session D73: Social Computing with Mobile Phones and Sensors II (Chair: Taemie Kim)
Invited Talk on Workshop on Social Computing with Mobile Phones & Sensors (III)
Scaling Behaviors in the Communication Network between Cities
Gautier Krings, Francesco Calabrese, Carlo Ratti, and Vincent D Blondel
Decentralized Detection of Group Formations from Wearable Acceleration Sensors
Martin Wirz, Daniel Roggen, and Gerhard Troster
Touch Me Wear: Getting Physical with Social Networks
Aaron Beach, Baishakhi Raz, and Leah Buechley
Sensor-based Feedback Systems in Organizational Computing
Taemie Kim, Daniel Olguin Olguin, Benjamin N. Walker, and Alex (Sandy) Pentland

The 2009 International Workshop on Security and Privacy in Online Social Networking (SPOSN-09)

Session D81: Security and Privacy in Online Social Networking I (Chair: Heather R. Lipford)
All Friends Are Not Created Equal: An Interaction Intensity Based Approach to Privacy in Online Social Networks
Lerone Banks and Shyhtsun Felix Wu
Privacy in Online Social Networking at Workplace
Yang Wang and Alfred Kobsa
Towards Enabling Web 2.0 Content Sharing Beyond Walled Gardens
San-Tsai Sun, Kirstie Hawkey, and Konstantin Beznosov

Session D82: Security and Privacy in Online Social Networking II (Chair: Yang Wang)
Visible Flows: Contextual Integrity and the Design of Privacy Mechanisms on Social Network Sites
Heather Richter Lipford, Gordon Hull, Celine Latulipe, Andrew Besmer, and Jason Watson
Examining the Shifting Nature of Privacy, Identities, and Impression Management with Web 2.0
Kirstie Hawkey
Trust Inference in Complex Trust-oriented Social Networks
Guanfeng Liu, Yan Wang, and Mehmet Orgun
Multiple Identities on Social Networks: Issues of Privacy and Authenticity
Ananda Mitra

Session D83: Security and Privacy in Online Social Networking III (Chair: Kirstie Hawkey)
Security and Trust through Electronic Social Network-Based Interactions
Patrick Bichsel, Samuel Muller, Franz-Stefan Preiss, Dieter Sommer, and Mario Verdicchio
Witness-Based Collusion and Trust-Aware Societies
Amirali Salehi-Abari and Tony White
Enabling Privacy as a Fundamental Construct for Social Networks
E. Michael Maximilien, Tyrone Grandison, Kun Liu, Tony Sun, Dwayne Richardson, and Sherry Guo

The 2009 International Workshop on Social Mobile Web (SMW-09)

Session D91: Social Mobile Web I (Chair: Noshir Contractor)
Time Critical Content Delivery Using Predictable Patterns in Mobile Social Networks
Fawad Nazir, Jianhua Ma, and Aruna Seneviratne
Ubiquitous Monitoring and Human Behaviour in Intelligent Pervasive Spaces
Stuart Moran and Keiichi Nakata
Quantifying Reciprocity in Social Networks
Huiqi Zhang, Ram Dantu, and Joao Cangussu

Session D92: Social Mobile Web II (Chair: Josep M. Pujol)
Solutions to Security and Privacy Issues in Mobile Social Networking
Aaron Beach, Mike Gartrell, and Richard Han
Information Technology Capabilities for Digital Social Networks
Camille Grange and Izaak Benbasat
Has Anyone Seen My Goose? Social Network Services in Developing Regions
Narseo Vallina-Rodriguez, Pan Hui, and Jon Crowcroft

Session D93: Social Mobile Web III (Chair: Karen Church)
The Geolocation of Web Logs from Textual Clues
Clayton Fink, Christine Pietko, James Mayfield, Danielle Chou, Tim Finin, and Justin Martineau
The Circles of Latitude: Adoption and Usage of Location Tracking in Online Social Networking
Xinru Page and Alfred Kobsa
Automated Murmurs: The Social Mobile Tourist Application
Jill Freyne, Adam J. Brennan, Barry Smyth, Daragh Byrne, Alan F. Smeaton, and Garth J.F. Jones
Where Information Searches for You: The Visible Past Ubiquitous Knowledge Environment for Digital Humanities
Sorin Adam Matei, Eric Wernert, and Travis Faas

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Session D94: Social Mobile Web IV (Chair: Barry Smith)
Information Flow and Search in Unstructured Keyword Based Social Networks
Ankush Garg, Prantik Bhattacharyya, Charles U. Martel, and S. Felix Wu
Social Tagging in Query Expansion: A New Way for Personalized Web Search
Claudio Biancalana and Alessandro Micarelli
Panel for Social Mobile Web

The 2009 International Workshop on Leveraging Social Patterns for Privacy, Security, and Network Architectures (SP4SPNA-09)

Session DA1: Leveraging Social Patterns to Improve Network Performance (Chair: Kwan Hong Lee)
Real World Routing Using Virtual World Information
Pan Hui and Nishanth Sastry
Diverse Routing: Exploiting Social Behavior for Routing in Delay-Tolerant Networks
Tong Zhou, Romit Roy Choudhury, and Krishnendu Chakrabarty
Delivery Rate and Routing Overhead Analysis with Salvage in Collaborative On-Line Game Playing
Miao Wang and Xiling Luo

Session DA2: Interleaving Human Dynamics and Network Dynamics (Chair: Yaniv Altshuler)
Using Converging Technology to Bring Social Networking to Commerce
Colin Pattinson
Social Area Networks: Data Networking of the People, by the People, for the People
Nadav Aharony, David P. Reed, and Andrew Lippman
Invited Talk on Reality Mining and the New Deal on Data
Alex “Sandy” Pentland
Identifying Connectors and Communities: Understanding Their Impacts on the Performance of a DTN Publish/Subscribe System
M. Chuah and Alexandra Coman
Role of Game models in Social Networks
Y. B Reddy

Session DA3: Security and Privacy Applications of Social Information (Chair: Nadav Aharony)
Invited Talk on Detection and Prevention of Malicious Code Spread in Social Networks
Yuval Elovici
Social Networks’ XSS Worms
Mohammad Reza Faghani and Hossein Saidi
Socially Enhanced Network Address Translation
Alexis Malozemoff and Muthucumaru Maheswaran
A Network-Aware Distributed Membership Protocol for Collaborative Defense
David Zage, Carl Livadas, and Eve M. Schooler

Session DA4: Using and Collecting Social Information below the Application Level (Chair: Nadav Aharony)
Workshop Summary, Open Issues, and Future Directions

The 2009 International Workshop on Social Intelligence in Applied Gaming (SIAG-09)

Session DB1: Social Intelligence in Applied Gaming I (Chair: Antonio P. Sanfilippo)
Invited Talk on Social Intelligence in Applied Gaming
Shanna Tellerman

Session DB2: Model Validation and Evaluation in Social Gaming (Chair: Antonio P. Sanfilippo)
Validation of Sociocultural Models and Meta-Models via Serious Games
K. Brock Stitts, Colleen L. Phillips, and Norman D. Geddes
Inferring Player Rating from Performance Data in Massively Multiplayer Online Role-Playing Games (MMORPGs)
Kyong Jin Shim, Muhammad Aurangzeb Ahmad, Nishith Pathak, and Jaideep Srivastava

Session DB3: Research Issues in Analytical Gaming (Chair: Scott Butner)
ASC: A Proposed Architecture for Computing a Social Capital Gaming Metric
Colleen L. Phillips, K. Brock Stitts, and Norman D. Geddes
Avatars in Analytical Gaming
Andrew J. Cowell and Amanda K. Cowell
Mathematical Modeling of Social Games
Kam Tong Chan, Irwin King, and Man-Ching Yue

Session DB4: Social Intelligence in Applied Gaming II (Chair: Scott Butner)
Application and Evaluation of Analytic Gaming
Roderick M. Riensche, Louis M. Martucci, Jean C. Scholtz, and Mark A. Whiting
Satisficing the Masses: Applying Game Theory to Large-Scale, Democratic Decision Problems
Kshanti A Greene, Joseph M. Kniss, George F. Luger, and Carl R. Stern

Gaming to Predict Human Responses to Mass Casualty Events - An Approach for Quick Look Tools for Pandemic Influenza
Robert T. Brigantic, George A. Muller, Aimee E. Taylor, and Anthony F. Papayi

Constructing a Virtual World as a Research Tool: Lessons Learned from the First Iteration in the Development of Greenland
Travis L. Ross

Session DB5: Panel—R&D and Funding Issues in Applied Gaming (Chair: Antonio Sanfilippo)
Panel for EUC-09

Topic: Vision and Challenges for Embedded and Ubiquitous Computing

Chair:
Marco Avvenuti, University of Pisa, Italy

Panelists:
Jianhua Ma, Hosei University, Japan
Jingling Xue, University of New South Wales, Australia
Victor Leung, University of British Columbia, Canada
Pao-Ann Hsiung, National Chung Cheng University, Taiwan
Minyi Guo, Shanghai Jiaotong University, China
Stephen S. Yau, Arizona State University, USA
Wang Yi, Uppsala University, Sweden
Victor Bahl, Microsoft Research Redmond, USA

Panel for SocialCom-09

Topic: Promoting National Initiatives for Social Networking: Research Agendas for Computing and Information Scientists

Chair:
Jennifer Preece, University of Maryland, USA

Panelists:
Kevin Grandia, Hoggan and Associates, Canada
Ben Shneiderman, University of Maryland, USA
Sandy Pentland, MIT, USA
Jennifer Preece, University of Maryland, USA
Title: Community Detection and Behavior Prediction for Social Computing

Presenters
Huan Liu, Lei Tang, Nitin Agarwal, Arizona State University, USA

Abstract
The objective of this tutorial is to offer a comprehensive overview of challenges and techniques of community discovery in social media, and its application for collective behavior prediction and influence study. Social media emerges with the popularity of Web 2.0 and social networking sites. It facilities people to express their thoughts, voice their opinions, and connect to each other anytime and anywhere. Social media also provides an open platform such that like-minded people form virtual communities. Finding out these groups is one of the basic tasks in traditional social network analysis. The network in social media is normally in a very large scale, posing many new challenges that need to be addressed in social computing. This tutorial will cover state-of-the-art techniques to community discovery in social media. We will then discuss its applications to unique social computing tasks related to communities including collective behavior prediction and influence study.

Biographies
Huan Liu is a professor of Computer Science and Engineering at Arizona State University. He received his Bachelor of Engineering from Shanghai Jiao Tong University and Ph.D. from University of Southern California, researched at Telecom Research Labs in Australia, and taught at National University of Singapore before he joined ASU. He has been recognized for excellence in teaching and research in CSE, ASU. His research interests are in data/web mining, machine learning, social computing, and artificial intelligence, investigating problems that arise in many real-world applications with high-dimensional data of disparate forms such as social media, modeling group interaction, text categorization, biomarker identification, and text/web mining. His research has been sponsored by NSF, NASA, AFOSR, and ONR, among others. His well-cited publications include books, book chapters, encyclopedia entries as well as conference and journal papers. He serves on journal editorial boards and numerous conference program committees, and is a founding organizer of the International Workshop Series on Social Computing, Behavioral Modeling, and Prediction (http://sbp.asu.edu/) in Phoenix, AZ (SBP’08 and SBP’09). His professional memberships include AAAI, ACM, ASEE, and IEEE.

Nitin Agarwal is a professor of Information Science at University of Arkansas at Little Rock. He received his Bachelor of Technology in Information Technology from Indian Institute of Information Technology, India, and Ph.D. in Computer Science from Arizona State University. He is one of the founding members of the Social Computing group in the Data Mining and Machine Learning Lab at ASU. His primary research interests include Social Computing, Knowledge Extraction in Social Media, Modeling Influence, Collective Wisdom, Familiar Strangers, and Model Evaluation. His work has resulted in publications in various prestigious forums including book chapters, encyclopedia entries, conferences and journals. His presentation at Web Search and Data Mining (WSDM 2008) conference on “Identifying the Influential Bloggers in a Community” recorded the highest number of hits (over 700) among all the talks at the conference (http://videolectures.net/wsdm08_agarwal_iib/). He co-presented a tutorial at the premiere data mining conference KDD 2008 on “Blogosphere: Research Issues, Applications, and Tools” (http://videolectures.net/kdd08_liu_briat/). He is a co-guest editor of a special issue on “Social Computing in Blogosphere” for IEEE Internet Computing magazine appearing (2010).

Lei Tang is a Ph.D Candidate and Research Associate in Computer Science and Engineering at Arizona State University. He received his Bachelor of Science from Fudan University, China before he joined ASU. He is one of the founding members of the Social Computing group in the Data Mining and Machine Learning Lab at ASU. His primary research interests include social computing, web mining, relational learning, network evolution and group profiling, especially research problems arising in real-world applications with social media. He has published in reputed conferences, book chapters, and journals like KDD, CIKM, ICDM, ICML, IJCAI, AAAI, SDM, WSDM, WWW, TKDD, etc. He was awarded ASU GPSA Research Grant, SDM Doctoral Student Forum Fellowship, Student Travel Awards, and Scholarships in various conferences.
Title: The Social Science Approach to Web Mining

Presenters:
Sun-Ki Chai, David Chin, Scott Robertson, Kar-Hai Chu, Aaron Herres, University of Hawaii, USA

Abstract
While social computing has adopted some of the analytical techniques used by social scientists in its investigations, many computer scientists and engineers may be unaware of the full range of models and methods available and their appropriate mode of usage. This tutorial seeks to provide a broad overview within the context of relevant to web mining. We first provide a survey including social science content analysis methods, sociological social network models, and models of culture and action, as well as their applications to web mining. We then demonstrate some of their applications in the ongoing development of a social theory-driven web crawler.

Biographies
Sun-Ki Chai (B.S. Mathematical Sciences, M.S. Computer Science, Ph.D. Political Science, all Stanford University) is Associate Professor at the Department of Sociology, University of Hawaii. His theoretical interests revolve around integrating models of culture with predictive models of action. His primary substantive focus areas include cross-national studies of ethnic identity and conflict, as well as studies on the creation of economic and political institutions in East Asian development. He is the author of Choosing an Identity: A General Model of Preference and Belief Formation (University of Michigan Press, 2001), and co-editor of Culture and Social Theory (Transaction Publishers, 1998). His more recent work focuses on integrating social sciences theories and methods more rigorously into computational applications, particularly in agent-based simulation and web crawling.

David N. Chin is a Professor of Information and Computer Sciences at the University of Hawaii. He received his B.S. from M.I.T. and his Ph.D. from U.C. Berkeley where he developed UC, the UNIX Consultant, an intelligent agent that answers questions about the UNIX operating system and infers a model of the user's knowledge of UNIX from the interaction. David is an internationally recognized expert in the field of user modeling. He has served on the editorial board of the international journal, User Modeling and User-Adapted Interaction since its inception in 1990 and has guest edited six special issues including two on empirical evaluation. He was the program and local arrangements chair of the 2nd International Conference on User Modeling in 1990 and the general chair of the 5th International Conference on User Modeling in 1996, and a program committee member of the 4th, 7th-10th Conferences. Dr. Chin has been the PI or co-PI on 20 grants/contracts totaling $3.9 million. He is currently serving as his department's Associate Chair and has previously served as Vice-Chair (2006-7) and then Chair (2007-8) of the University of Hawaii at Manoa Faculty Senate.

Scott Robertson is an Associate Professor in the Information and Computer Sciences Department at the University of Hawaii. He conducts research in the area of human-computer interaction (HCI), specifically digital government and civic informatics. He has been an invited participant on e-voting workshops for the National Academy of Sciences and the American Association for the Advancement of Science. Dr. Robertson is a senior member of the Association for Computing Machinery and a Fellow of the American Psychological Society. He serves as an Associate Editor for the ACM journal "Transactions on Human-Computer Interaction" and as Special Editor for the Human Sciences for the journal "Interacting with Computers." He is the principle investigator for a National Science Foundation project entitled "Digital Deliberation: Searching and Deciding How to Vote." Dr. Robertson is involved in interface development and HCI-related issues for the Cultural Change and Political Violence project at the University of Hawaii.

Kar-Hai Chu is a PhD candidate in the Communication and Information Sciences program at the University of Hawaii at Manoa. He has previously received a B.S. in Computer Science at Johns Hopkins University and M.S. in Computer Science at Columbia University. He has worked in both industry and academic settings on projects including e-commerce development, education and assessment technology, and ubiquitous wireless applications. His current research interests are in socio-technical systems and social network analysis.

Aaron Herres is a Master student in the Information and Computer Science department of the University of Hawaii. He received his undergraduate degree from the University of Puget Sound, and has worked in the industry as a consultant for Microsoft at Avanade. At UH, Aaron previously worked for the Laboratory for Interactive Learning Technology, working on mobile augmented reality applications.
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