

Symposium Program

Sunday September 27, 2009

- 9:00 am – 5:00 pm Pre-Symposium Workshops (Olmstead and Whitney, CCNF)
- 5:30 pm – 7:30 pm Reception and Pre-Registration (Sapphire, Crowne Plaza Hotel)

Monday September 28, 2009

- 7:30 am – 8:30 am Breakfast and Registration (Common Break Area, CCNF)
- 8:30 am – 8:45 am Opening Remarks (Porter/DeVeaux, CCNF)
- 8:45 am – 9:00 am Opening Address - Satish Tripathi, Provost, University at Buffalo
- 9:00 am – 10:00 am Keynote: "Security Challenges in An Increasingly Connected World", Yi-Min Wang, Director of Internet Services Research Center (ISRC), Microsoft Research (Porter/DeVeaux, CCNF)
- 10:00 am – 10:30 am Coffee Break (Common Break Area)
- 10:30 am – 12:20 pm Session 1: Replication (Chair: Anand Tripathi, U. of Minnesota)
Relaxed Atomic Broadcast: State-Machine Replication using Bounded Memory
Omid Shahmirzadi (EPFL, CH); Sergio Mena (EPFL, CH); Andre Schiper (EPFL, CH)
When and How to Change Quorums on Wide Area Networks
Michael Merideth (CMU); Florin Oprea (CMU); Mike Reiter (North Carolina at Chapel Hill)
Multithreading-Enabled Active Replication for Event Stream Processing Operators
Andrey Brito (TU Dresden, DE); Christof Fetzer (TU Dresden, DE); Pascal Felber (University of Neuchatel, CH)
Performance Evaluation of a Metaprotoocol for Database Replication Adaptability (Short Paper)
María Idoia Ruiz-Fuertes (Instituto Tecnológico de Informática, ES); Francesc Muñoz-Escóï (Inst. Tecnológico de Informática, ES)
- 12:20 pm – 1:30 pm Lunch (Cataract Room)
- 1:30 pm – 3:00 pm Session 2: Distributed Services (Chair: Andre Schiper, EPFL)
Reliable and Highly Available Distributed Publish/Subscribe Service
Reza Sherafat Kazemzadeh (University of Toronto, CA); Hans-Arno Jacobsen (University of Toronto, CA)
Resource-Aware Migratory Services in Wide-Area Shared Computing Environments
Anand Tripathi (University of Minnesota, US); Vinit Padhye (University of Minnesota, US); Devdatta Kulkarni (University of Minnesota, US)
Model-Based Validation for Internet Services
Andrew Tjiang (Rutgers University, US); Fabio Oliveira (Rutgers University, US); Ricardo Bianchini (Rutgers University, US); Richard P. Martin (Rutgers University, US); Thu D. Nguyen Rutgers University, US)
- 3:00 pm – 3:30 pm Coffee Break (Common Break Area)
- 3:30 pm – 5:30 pm Session 3: Security (Chair: Sencun Zhu, Penn State U.)
The Effects of Threading, Infection Time, and Multiple-Attacker Collaboration on Malware Propagation
Yu Zhang (Purdue, US); Bharat Bhargava (Purdue, US); Philipp Hurni (University of Bern, CH)
Designing System-level Defenses against Cellphone Malware (Short Paper)
Liang Xie (The Pennsylvania State University, US); Xinwen Zhang (Samsung Information Systems America, US); Ashwin Chaugule (Pennsylvania State University, US); Trent Jaeger (The Pennsylvania

State University, US); Sencun Zhu (The Pennsylvania State University, US)

[PolyVaccine: Protecting Web Servers against Zero-Day, Polymorphic and Metamorphic Exploits \(Short Paper\)](#)

Luis Campo-Giralte (Universidad Politecnica de Madrid, ES); Ricardo Jimenez-Peris (Universidad Politecnica de Madrid, ES); Marta Patiño-Martinez (Universidad Politecnica de Madrid, ES)

[Fault Localization for Firewall Policies \(Short Paper\)](#)

JeeHyun Hwang (North Carolina State University, US); Tao Xie (North Carolina State University, US);

Fei Chen (Michigan State University, US); Alex X. Liu (Michigan State University, US)

[DToken: a Lightweight and Traceable Delegation Architecture for Distributed Systems](#)

Erica Y. Yang (Rutherford Appleton Laboratory, Science and Technology Facilities Council, UK); Brian Matthews (STFC, UK)

Tuesday September 29, 2009

- **7:30 am – 8:30 am Breakfast and Registration (Common Break Area, CCNF)**

- **8:30 am – 9:30 am Keynote: "Privacy and Identity Management for Distributed Systems", Simone Fischer-Huebner, Karlstad University, Sweden (Porter/DeVeaux, CCNF)**

- **9:30 am – 11:00 am Session 4: Fault Tolerance (Chair: David Powell, LAAS-CNRS)**

[Constraint Based Automated Synthesis of Nonmasking and Stabilizing Fault-Tolerance](#)

Fuad Abujarad (Michigan State University, US); Sandeep Kulkarni (Michigan State University, US)
[Communication-based Prevention of Non-P-Pattern](#)

Yiwei Ci (Harbin Institute of Technology, CN); Zhan Zhang (Harbin Institute of Technology, CN); De-Cheng Zuo (Harbin Institute of Technology, CN); Zhi-Bo Wu (Harbin Institute of Technology, CN) ; Xiao-Zong Yang (Harbin Institute of Technology, CN)

[Spin One's Wheels? Byzantine Fault Tolerance with a Spinning Primary](#)

Giuliana Santos Veronese (University of Lisbon, PT); Miguel Correia (University of Lisbon, PT); Alysson Neves Bessani (Faculdade de Ciencias da Universidade de Lisboa, PT); Lau Cheuk Lung (UFSC, BR)

- **11:00 am – 11:30 am Coffee Break (Common Break Area)**

- **11:30 am – 1:00 pm Session 5: Distributed Algorithms (Chair: Rui Oliveira, U. do Minho)**

[A Self-Stabilizing O\(n\)-Round k-Clustering Algorithm](#)

Ajoy K. Datta (UNLV, US); Stéphane Devismes (Université Joseph Fourier, FR); Lawrence L. Larmore (UNLV, US)

[A Partition-tolerant Manycast Algorithm for Disaster Area Networks](#)

Mikael Asplund (Linköping University, SE); Simin Nadjm-Tehrani (Linköping University, SE)

[Genuine versus Non-Genuine Atomic Multicast Protocols for Wide Area Networks: An Empirical Study](#)

Nicolas Schiper (University of Lugano, CH); Pierre Sutra (INRIA, FR); Fernando Pedone (University of Lugano, CH)

- **1:00 pm – 2:00 pm Lunch (Cataract Room)**

- **2:00 pm – 4:10 pm Session 6: Wireless Sensor Networks (Chair: Mukesh Singhal, U. of Kentucky)**

[A Holistic Solution to Pursuer-Evader Tracking in Sensor Networks](#)

Xuming Lu (University at Buffalo, SUNY, US); Murat Demirbas (SUNY Buffalo, US); Chunming Qiao (SUNY Buffalo, US)

[PEQ: A Privacy-preserving Scheme for Exact Query Evaluation in Distributed Sensor Data Networks](#)

Hai Vu (University of Texas at Dallas, US); Thuc Nguyen (Vietnamese National University at HCMC, University of Natural Sciences, VN); Neeraj Mittal (University of Texas at Dallas, US); Subbarayan Venkatesan (University of Texas at Dallas, US)

[On Consistent Neighborhood Views in Wireless Sensor Networks](#)

Arshad Jhumka (University of Warwick, UK); Luca Mottola (Swedish Institute of Computer Science (SICS), SE)

TASK: Template-Based Key Assignment for Confidential Communication in Wireless Networks (Short Paper)

Ramon Novales (The University of Texas at Dallas, US); Neeraj Mittal (University of Texas at Dallas, US)

ZoneTrust: Fast Zone-Based Node Compromise Detection and Revocation in Sensor Networks Using Sequential Analysis (Short Paper)

Jun-Won Ho (The University of Texas at Arlington, US); Matthew Wright (University of Texas at Arlington, US); Sajal K. Das (The University of Texas at Arlington, US)

- **4:10 pm – 4:30 pm Coffee Break (Common Break Area)**

- **4:30 pm – 6:00 pm Session 7: Network Protocols (Chair: Stefano Russo, University of Naples "Federico II", IT)**

The Blocking Option in Routing Protocols

Yan Li (The University of Texas at Austin, US); Mohamed G. Gouda (University of Texas at Austin, US)

X-BOT: A Protocol for Resilient Optimization of Unstructured Overlays

João Leitão (Inesc-ID / IST, PT); João Pedro Marques (Inesc-ID / IST, PT); Jose Pereira (Universidade do Minho, Braga, Portugal, PT); Luis Rodrigues (Inesc-ID/IST, PT)

A Framework for Distributed Monitoring and Root Cause Analysis for Large IP Networks

Dipyaman Banerjee (IBM India Research Lab, IN); Venkateswara R Madduri (IBM India Research Lab, IN); Mudhakar Srivatsa (IBM T.J. Watson Research Center, US)

- **7:00 pm – 9:00 pm Banquet (Cataract Room)**

Wednesday September 30, 2009

- **7:30 am – 8:30 am Breakfast and Registration (Common Break Area, CCNF)**

- **8:30 am – 10:20 am Session 8: Database and Storage (Chair: Murat Demirbas, SUNY at Buffalo)**
On the Cost of Database Clusters Reconfiguration

Ricardo Vilaça (Universidade do Minho, PT); Jose Pereira (Universidade do Minho, Braga, Portugal, PT); Rui Carlos Oliveira (Universidade do Minho, PT); José Enrique Armendáriz-Iñigo (Universidad Pública de Navarra, ES); José Ramón González de Mendívil (Universidad Pública de Navarra, ES)

Location-Aware Cache-Coherence Protocols for Distributed Transactional Contention Management in Metric-Space Networks

Bo Zhang (Virginia Tech, US); Binoy Ravindran (Virginia Tech, US)

Co-Scheduling of Disk Head Time in Cluster-based Storage

Matthew Wachs (Carnegie Mellon University, US); Greg R. Ganger (Carnegie Mellon University, US)

Assessment and Improvement of Hang Detection in the Linux Operating System (Short Paper)

Domenico Cotroneo (University of Naples, IT); Roberto Natella (University of Naples "Federico II", IT); Stefano Russo (University of Naples "Federico II", IT)

- **10:20 am – 10:50 am Coffee Break (Common Break Area)**

- **10:50 am - 11:30 am Keynote: "Vulnerability Analysis of Wireless Sensor Networks: Challenges and Solutions" - Dr. Sajal Das (Program Director, Division of Computer and Network Systems, National Science Foundation, USA) (Porter/DeVeaux, CCNF)**

- **11:30am - 12:00 Noon Discussion on Research Funding Challenges**

- **12:00 Noon – 12:30 pm Business Meeting (Porter/DeVeaux, CCNF)**