SSS 2006

Eighth International Symposium on Stabilization, Safety, and Security of Distributed Systems

Conference Program

November 17th-19th, 2006, Dallas, Texas, USA

Thursday, November 16 ∎

18:00 - 21:00 *Registration and Reception*

Friday, November 17 ∎

7:00 - 8:00 *Registration*
8:00 - 9:00 *Invited Talk*

- Online Advertising: The Good, The Bad, and The Ugly
  Yi-Min Wang (Microsoft Research)

9:00 - 9:15 *Break*
9:15 - 10:55 *Clock Synchronization*

- Stabilizing Clock Synchronization for Wireless Sensor Networks
  Ted Herman and Chen Zhang (University of Iowa)

- Self-Stabilizing Byzantine Digital Clock Synchronization
  Ezra N. Hoch, Danny Dolev, and Ariel Daliot (Hebrew University of Jerusalem)

- A Byzantine-Fault Tolerant Self-Stabilizing Protocol for Distributed Clock Synchronization Systems
  Mahyar R. Malekpour (NASA Langley Research Center)

- Bounding the Impact of Unbounded Attacks in Stabilization
  Toshimitsu Masuzawa (Osaka University) and Sébastien Tixeuil (Université de Paris Sud)

10:55 - 11:10 *Break*
11:10 - 12:25 *Transformers*

- All k-bounded policies are equivalent for self-stabilization
  Joffroy Beauquier, Colette Johnen, and Stéphane Messika (Université de Paris Sud)

- From Self- to Snap- Stabilization
  Alain Cournier, Stéphane Devismes, and Vincent Villain (Université de Picardie)

- A 1-Strong Self-Stabilizing Transformer
  Joffroy Beauquier and Sylvie Delaët, and Sammy Haddad (Université de Paris Sud)

12:25 - 14:00 *Lunch*
14:00 - 15:40 *Sensor Networks*

- Stabilizing Health Monitoring for Wireless Sensor Networks
  William Leal, Sandip Bapat, Taewoo Kwon, Pihui Wei, and Anish Arora (Ohio State University)

- A Case Study on Prototyping Power Management Protocols for Sensor Networks
  Mahesh Arumugam, Limin Wang, and Sandeep S. Kulkarni (Michigan State University)

- Evaluation of a Tracking Architecture in Wireless Sensor Networks
  Florent Claerhout (IRISA, INRIA)

- Coverage, Connectivity, and Fault Tolerance Measures of Wireless Sensor Networks
  Habib Ammari and Sajal Das (University of Texas at Arlington)

15:40 - 15:55 *Break*
15:55 - 17:35 *Fault-Tolerant Systems I*

- Fault Masking in Tri-Redundant Systems
  Mohamed G. Gouda (University of Texas at Austin), Jorge A. Cobb (University of Texas at Dallas), and Chin-Tser Huang (University of South Carolina at Columbia)

- Optimal Message-Driven Implementation of Omega with Mute Processes
  Martin Biely and Josef Widder (Technische Universität Wien)

- Reliability and Availability Analysis of Self-Stabilizing Systems
  Abhishek Dhama, Oliver Theel, and Timo Warns (Carl von Ossietzky University of Oldenburg)

- Unconscious Eventual Consistency with Gossips

  Roberto Baldoni (Università di Roma), Rachid Guerraoui (EPFL), Ron R. Levy (MIT), Vivien Quéma, and Sara Tucci Piergiovanni (Università di Roma)

17:35 - 17:50 *Break*
17:50 - 19:00 *Brief Announcements I*

- Wait-Free Dining for Eventual Weak Exclusion

  Scott M. Pike, Yantao Song, and Kaustav Ghoshal (Texas A&M University)

- Chasing the Weakest System Model for Implementing boldΩ and Consensus

  Martin Hutle (EPFL and Vienna University of Technology), Dahlia Malkhi (Microsoft Research), Ulrich Schmid (Vienna University of Technology), and Lidong Zhou (Microsoft Research)

- Termination Detection in an Asynchronous Distributed System with Crash-Recovery Failures

  Felix C. Freiling (University of Mannheim), Matthias Majuntke (RWTH Aachen University), and Neeraj Mittal (University of Texas at Dallas)

- Self-Stabilizing Spanning Tree Algorithm for Large Scale Systems

  Thomas Herault, Pierre Lemarinier, Olivier Peres, Laurence Pilard, and Joffroy Beauquier (Université de Paris Sud)

- An Efficient and Self-Stabilizing Link Formation Algorithm

  Jun Kiniwa and Kensaku Kikuta (University of Hyogo)

17:50 - 19:00 *Brief Announcements II*

- Distributed Synthesis of Fault-Tolerance

  Borzoo Bonakdarpour, Sandeep S. Kulkarni, and Fuad Abujarad (Michigan State University)

- An Adaptive Randomised Searching Protocol in Peer-to-peer Systems based on Probabilistic Weak Quorum System

  Yu Wu, Taisuke Izumi, Fukuhito Ooshita, Hirotsugu Kakugawa, and Toshimitsu Masuzawa (Osaka University)

- Self-Healing Algorithms for Reconfigurable Networks
  I-Ching Boman, Jared Saia, Chaouki T. Abdallah, Edl Schamiloglu (University of New Mexico)

- Towards Modular Verification of Stabilisation in Self-Adaptive Embedded Systems
  Ina Schaefer and Arnd Poetzsch-Heffter (Technische Universität Kaiserslautern)

- Analyzing the Interactions of Self-Propagating Codes in Multi-Hop Networks
  Sapon Tanachaiwiwat and Ahmed Helmy (University of Southern California)

- Exploration and Mitigation of Deafness Problems in Directional Antennas Based Wireless Ad-hoc Networks
  Kai Chen, Fan Jiang, and Zongyao Tang (University of Science and Technology of China)

- A Synthetic Public Key Management Scheme for Large-scale MANET
  Pan Dong, Pei-dong Zhu, and Xi-cheng Lu (National University of Defense Technology)

19:00 - 20:30 *Dinner*
20:30 - 21:30 *Business Meeting (Chair: Sukumar Ghosh)*

Saturday, November 18   ■

8:30 - 9:30 *Invited Talk (Speaker: Rachid Guerraoui)*

- A General Characterization of Indulgence
  Rachid Guerraoui (EPFL) and Nancy Lynch (MIT)

9:30 - 9:45 *Break*
9:45 - 11:00 *Security Protocols I*

- Self-Protection for Distributed Component-Based Applications
  Benoit Claudel, Noël De Palma (Institut National Polytechnique de Grenoble), Renaud Lachaize (Université Joseph Fourier, Grenoble), and Daniel Hagimont (Institut National Polytechnique, Toulouse)

- Secure Communication for RFIDs Proactive Information Security within Computational Security
  Shlomi Dolev and Marina Kopeetsky (Ben Gurion University)

- Logarithmic Keying of Communication Networks
  Mohamed G. Gouda (University of Texas), Sandeep S. Kulkarni (Michigan State University), and Ehab S. Elmallah (University of Alberta)

11:00 - 11:15 *Break*
11:15 - 12:30 *Synchronization*

- Self-Stabilizing Philosophers with Generic Conflicts
  Praveen Danturi, Mikhail Nesterenko (Kent State University), and Sébastien Tixeuil (Université de Paris Sud)

- Toward a Time-Optimal Odd Phase Clock Unison on Trees
  Christian Boulinier, Franck Petit, and Vincent Villain (Universite de Picardie)

- Self-Stabilizing Asynchronous Phase Synchronization in General Graphs
  Chi-Hung Tzeng (National Tsing Hua University), Jehn-Ruey Jiang, and Shing-Tsaan Huang (National Central University)

12:30 - 14:00 *Lunch*
14:00 - 15:40 *Potpourri*

- Using Eventually Consistent Compasses to Gather Oblivious Mobile Robots with Limited Visibility
  Samia Souissi, Xavier Défago (Japan Advanced Institute of Science and Technology (JAIST), and Masafumi Yamashita (Kyushu University)

- Circle Formation of Weak Mobile Robots
  Yoann Dieudonné, Ouiddad Labbani-Igbida, and Franck Petit (Université de Picardie)

- Selfish Stabilization
  Anurag Dasgupta, Sukumar Ghosh (University of Iowa), and Sébastien Tixeuil (Université de Paris Sud)

- Safe Peer-to-Peer Self-Downloading
  Ted Herman (University of Iowa), Colette Johnen (Université de Paris Sud), and Kajari Ghosh Dastidar (University of Iowa)

15:40 - 15:55 *Break*

15:55 - 17:35 *Fault-Tolerant Systems II*

- Incremental Synthesis of Fault-Tolerant Real-Time Programs
  Borzoo Bonakdarpour and Sandeep S. Kulkarni (Michigan State University)

- Self-Adaptive Disk Arrays
  Jehan-François Pâris (University of Huston), Thomas J. E. Schwarz (Santa Clara University), and Darrell D. E. Long (University of California)

- Recovery Oriented Programming
  Olga Brukman and Shlomi Dolev (Ben Gurion University)

- Self-Stabilizing Device Drivers
  Shlomi Dolev and Reuven Yagel (Ben Gurion University)

17:35 - 17:50 *Break*

17:50 - 19:30 *Panel "Self-Stabilization from Theory to Practice"*

  (Chair: Anish Arora)

19:30 - ⋆ *Dinner*

Sunday, November 19   ■

8:30 - 9:30 *Invited Talk (Speaker: Shlomi Dolev)*

- Stabilization Enabling Technology
  Shlomi Dolev and Yinnon Haviv (Ben Gurion University)

9:30 - 9:45 *Break*

9:45 - 11:25 *Graph Algorithms*

- Composition of Fault-Containing Protocols Based On Recovery Waiting Fault-Containing Composition Framework
  Yukiko Yamauchi (Osaka University), Sayaka Kamei (Tottori University of Environmental Studies), Fukuhito Ooshita (Osaka University), Yoshiaki Katayama (Nagoya Institute of Technology), Hirotsugu Kakugawa, and Toshimitsu Masuzawa (Osaka University)

- A Memory Efficient Self-stabilizing Algorithm for Maximal k-packing
  Fredrik Manne and Morten Mjelde (University in Bergen)

- On Bootstrapping Topology Knowledge in Anonymous Networks
  Toshimitsu Masuzawa (Osaka University) and Sébastien Tixeuil (Université de Paris Sud)

- Distributed Edge Coloration for Bipartite Networks
  Shing-Tsaan Huang (National central University) and Chi-Hung Tzeng (National Tsing Hua University)

11:25 - 11:40 *Break*

11:40 - 12:55 *Security Protocols II*

- A Dependable Intrusion Detection Architecture Based on Agreement Services
  Michel Hurfin (IRISA, INRIA), Jean-Pierre Le Narzul (ENST Bretagne), Frédéric Majorczyk, Ludovic Mé, Ayda Saidane, Eric Totel (Supélec), and Frédéric Tronel (Université Rennes 1)

- Self-Adaptive Worms and Countermeasures
  Wei Yu (Texas A&M University), Nan Zhang (University of Texas at Arlington), and Wei Zhao (Texas A&M University)

- Energy-Efficient and Non-Interactive Self-Certification in MANETs
  Jeong Hyun Yi (Samsung Advanced Institute of Technology)

12:55 - 14:30 *Lunch*