DISC 2006 – Program
Stockholm, Sweden, September 18-20, 2006

Sunday, 17 September 2006
9:00-16:00  Dynamo Workshop
16:30-18:00  Dynamo MC Meeting

Monday, 18 September 2006
08:50 – 09:00  DISC Welcome
09:00 – 10:00  DISC Invited Lecture Invited Talk I, Chair: Shlomi Dolev
  Provable Unbreakable Hyper-Encryption Using Distributed Systems
  Michael Rabin
10:00 – 10:15  Coffee Break
10:15 – 11:15  DISC Invited Lecture Invited Talk II, Chair: Michel Raynal
  Time, Clocks, and the Ordering of My Ideas about Distributed Systems
  Leslie Lamport
11:15 – 11:30  Break
11:30 – 12:30  DISC Invited Lecture Invited Talk III, Chair: Alex Shvartsman
  My Early Days in Distributed Computing Theory: 1979-1982
  Nancy Lynch
12:30 – 14:00  Lunch (Provided by DISC)
14:00 – 15:40  Session I, Chair: Maurice Herlihy
14:00-14:25  Exploring Gafni’s reduction land: from $\Omega^k$ to wait-free adaptive
  $(2p - \left\lceil \frac{k}{p} \right\rceil)$-renaming via k-set agreement
  Achour Mostefaoui, Michel Raynal, Corentin Travers
14:25-14:50  Renaming in Message Passing Systems with Byzantine Failures
  Michael Okun, Amnon Barak
14:50-15:15  Built-in Coloring for Highly-Concurrent Doubly-Linked Lists
  Hagit Attiya, Eshcar Hillel
15:15-15:40  Fault-tolerant and Self-stabilizing Mobile Robots Gathering
  Xavier Défago, Maria Gradinariu, Stéphane Messika, Philippe Raipin-Parvédy
15:40 – 15:55  Coffee Break
15:55 – 17:35  Session II, Chair: Marina Papatriantafillou

15:55-16:20  Fast Computation by Population Protocols With a Leader
Dana Anghin, James Aspnes, David Eisenstat

16:20-16:45  On Self-Stabilizing Search Trees
Doina Bein, Ajoy K. Datta, Lawrence L. Larmore

16:45-17:10  Efficient Dynamic Aggregation
Yitzhak Birk, Idit Keidar, Liran Liss, Assaf Schuster

17:10-17:35  Groupings and Pairings in Anonymous Networks
Jerémie Chalopin, Shantanu Das, Nicola Santoro

17:35 – 17:50  Break

17:50-18:26  Brief Announcements I, Chair: Sébastien Tixeuil

17:50-17:56  Brief Announcement: Abortable Shared Objects
Marcos K. Aguilera, Svend Frelund, Vassos Hadzilacos,
Stephanie Lorraine Horn, Sam Toueg

17:56-18:02  Brief Announcement: Fault-Tolerant SemiFast Implementations of
Atomic Read/Write Registers
Chryssis Georgiou, Nicolas C. Nicolaou, Alexander A. Shvartsman

18:02-18:08  Brief Announcement: Convergence Analysis of Scalable Gossip Protocols
Stacy Patterson, Bassam Bamieh, Amr El Abbadi

18:08-18:14  Brief Announcement: Computing Automatically the Stabilization Time
Against the Best and the Worst Schedules
Joffroy Beauquier, Colette Johnen, Stéphane Messika

18:14-18:20  Brief Announcement: Multislicing: Many Slices are Better than One
Vinit A. Ogale, Vijay K. Garg

18:20-18:26  Brief Announcement: on Augmented Graph Navigability
Pierre Fraigniaud, Emmanuelle Lebhar, Zvi Lotker

18:30 – 20:00  DISC Plenary Assembly/Rump Session

TUESDAY 19 SEPTEMBER 2006

08:30 – 10:10  Session III, Chair: Nancy Lynch

08:30-08:55  A New Proof of the GHS Minimum-spanning Tree Algorithm
Yoram Moses, Benny Shimony

08:55-09:20  A Knowledge-Based Analysis of Global Function Computation
Joseph Y. Halpren, Sabina Petride

09:20-09:45  Checking a Multithreaded Algorithm with +CAL
Leslie Lamport

09:45-10:10  Capturing Register and Control Dependence in Memory Consistency Models
with Applications to the Itanium Architecture
Lisa Higham, LillAnne Jackson, Jalal Kawash

10:10 – 10:25  Coffee Break
10:25 – 12:05  Session IV, Chair: Gadi Taubenfeld

10:25-10:50  Conflict Detection and Validation Strategies for Software Transactional Memory
Michael F. Spear, Virendra J. Marathe, William N. Scherer III, Michael L. Scott

10:50-11:15  Transactional Locking II
Dave Dice, Ori Shalev, Nir Shavit

11:15-11:40  Less is More: Consensus Gaps Between Restricted and Unrestricted Objects
Yehuda Afek, Eran Shalom

11:40-12:05  One-Step Consensus Solvability
Taisuke Izumi, Toshimitsu Masuzawa

12:05 – 13:30  Lunch (Provided by DISC)

13:30 – 15:10  Session V, Chair: André Schiper

Ran Canetti, Ling Cheung, Diksun Kaynar, Moses Liskov, Nancy Lynch, Olivier Pereira, and Roberto Segala

13:55-14:20  On Consistency of Encrypted Files
Alina Oprea, Michael K. Reiter

14:20-14:45  Agreeing to Agree: Conflict Resolution for Optimistically Replicated Data
Michael B. Greenwald, Sanjeev Khanna, Keshav Kunal, Benjamin C. Pierce, Alan Schmitt

14:45-15:10  A Lazy Snapshot Algorithm with Eager Validation
Torvald Riegel, Pascal Felber, Christof Fetzer

15:10 – 15:25  Break

15:25 – 16:07  Brief Announcements Session II, Chair: Dariusz Kowalski

15:25-15:31  Brief Announcement: Decoupled Quorum-based Byzantine-Resilient Coordination in Open Distributed Systems
Alysson Neves Bessani, Miguel Correia, Joni da Silva Fraga, Lau Cheuk Lung

Nicolas Schiper, Rodrigo Schmidt, Fernando Pedone

François Bonnet, Frédéric Tronel, Spyros Voulgaris

15:43-15:49  Brief Announcement: Decentralized, Connectivity-Preserving, and Cost-Effective Structured Overlay Maintenance
Yu Chen, Wei Chen

15:49-15:55  Brief Announcement: Monitoring of Distributed Linear Computations
Anton Esin, Rostislav Yavorskiy, Nikolay Zemtsov

15:55-16:01  Brief Announcement: Communication-optimal Implementation of Failure Detector Class O
Mikel Larrea, Alberto Lafuente, and Joachim Wieland

16:01-16:07  Brief Announcement: Synchronous Distributed Algorithms for Node Discovery and Configuration in Multi-channel Cognitive Radio Networks
Srinivasan Krishnamurthy, R. Chandrasekaran, Neeraj Mittal and S. Venkatesan

16:15 20th Anniversary Celebration Panel

Eli Gafni, Michel Raynal, Nicola Santoro, Jan van Leeuwen, Shmuel Zaks
WEDNESDAY SEPTEMBER 20TH 2006

08:30 – 10:10  Session VI, Chair: Michel Raynal

08:30-08:55  Bounded Wait-Free f-resilient Atomic Byzantine Data Storage Systems for an Unbounded Number of Clients
Rida A. Bazzi, Yiu Ding

08:55-09:20  Time and Communication Efficient Consensus for Crash Failures
Bogdan S. Chlebus, Dariusz R. Kowalski

09:20-09:45  Minimizing the Number of ADMs in a General Topology Optical Network
Michele Flammini, Mordechai Shalom, Shmuel Zaks

09:45-10:10  Exact Distance Labelings Yield Additive-Stretch Compact Routing Schemes
Arthur Brady, Lenore Cowen

10:10 – 10:25  Coffee Break

10:25 – 12:05  Session VII, Chair: Lenka Carr-Motycka

10:25-10:50  A Fast Distributed Approximation Algorithm for Minimum Spanning Trees
Maleq Khan, Gopal Pandurangan

10:50-11:15  On Randomized Broadcasting in Power Law Networks
Robert Elsässer

11:15-11:40  Distributed Approximation Algorithms in Unit-disk Graphs
A. Czygrinow, M. Hańcowski

11:40-12:05  The Weakest Failure Detectors to Boost Obstruction-Freedom
Rachid Guerraoui, Michal Kapalka, Petr Kouznetsov

12:05 – 13:30  Lunch (Provided by DISC)

13:30 – 15:10  Session IX, Chair: Alex Shvartsman

Alex Brodsky, Faith Ellen, Philipp Woelfel

13:55-14:20  Bounded-Wait Combining: Constructing Robust and High-Throughput Shared Objects
Danny Hendler, Shay Kutten

14:20-14:45  Byzantine and Multi-writer K-quorums
Amitanand S. Aiyer, Lorenzo Alvisi, Rida A. Bazzi

14:45-15:10  Subconsensus Tasks: Renaming is Weaker than Set Agreement
Eli Gafni, Sergio Rajsbaum, Maurice Herlihy

15:10 – 15:25  Coffee Break
15:25 – 17:05  Session IX, Chair: Shlomi Dolev

15:25-15:50  Robust Network Supercomputing with Malicious Processes
Kishori M. Konwar, Sanguthevar Rajasekaran, Alexander A. Shvartsman

15:50-16:15  Distributed Resource Allocation in Stream Processing
Cathy H. Xia, James A. Broberg, Zhen Liu, Li Zhang

16:15-16:40  Low-latency Atomic Broadcast in the Presence of Contention
Piotr Zieliński

16:40-17:05  Oblivious Gradient Clock Synchronization
Thomas Locher, Roger Wattenhofer

End of DISC 2006