

CONTENTS

Session 1. (Chairman: Eli Gafni)

A Distributed Spanning Tree Algorithm	1
<i>K.E. Johansen, U.L. Jørgensen, S.H. Nielsen, S.E. Nielsen and S. Skyum (Aarhus University).</i>	
Directed Network Protocols	13
<i>G. Tel (University of Utrecht).</i>	
Fault Tolerant Queries in Computer Networks	30
<i>A. Baratz, I. Gopal(IBM T.J.Watson Research Center). and A. Segall (Technion).</i>	
General and Efficient Decentralized Consensus Protocols	41
<i>J.-C. Bermond, J.-C. König (Université Paris-Sud) and M.Raynal (Université de Rennes).</i>	
A Framework for Agreement	57
<i>K.J. Perry (IBM T.J.Watson Research Center).</i>	
Byzantine Firing Squad using a Faulty External Source	76
<i>E.T. Ordman (Memphis State University).</i>	

Session 2. (Chairman: Michel Raynal)

An Improved Multiple Identification Algorithm for Synchronous Broadcasting Networks	84
<i>W. Vogler (Technical University of Munich).</i>	
Distributed Algorithms for Tree Pattern Matching	92
<i>G. Singh, S.A. Smolka and I.V. Ramakrishnan (SUNY at Stony Brook).</i>	
On the Packet Complexity of Distributed Selection	108
<i>A. Negro (University of Salerno), N. Santoro (Carleton University) and J. Urrutia (University of Ottawa).</i>	
Load Balancing in a Network of Transputers	116
<i>O.Vornberger (University of Paderborn).</i>	

Session 3. (Chairman: Nicola Santoro)

Experience with a New Distributed Termination Detection Algorithm	127
<i>F. Mattern (University of Kaiserslautern).</i>	
A Distributed Deadlock Avoidance Technique	144
<i>F. Belik (Lund University).</i>	
How to Detect a Failure and Regenerate the Token in the Log(N) Distributed Algorithm for Mutual Exclusion	155
<i>M. Naimi and M. Trehel (Lab d'Informatique Besancon).</i>	
Verification of Connection-Management Protocols	167
<i>A.A Schoone (University of Utrecht).</i>	

Generalized Scheme for Topology-Update in Dynamic Networks	187
<i>E. Gafni (UCLA).</i>	
Local Fail-safe Network Reset Procedure	197
<i>Y. Afek (AT & T Bell Labs.), B. Awerbuch (MIT)</i> <i>and E. Gafni (UCLA)</i>	
Session 4. (Chairman: Jan van Leeuwen)	
Synchronizing Asynchronous Bounded Delay Networks	212
<i>C.-T. Chou (UCLA), I. Cidon, I.S. Gopal (IBM T.J. Watson Research Center)</i> <i>and S. Zaks (Technion).</i>	
A Modular Proof of Correctness for a Network Synchronizer	219
<i>A. Fekete (Harvard University), N. Lynch and L. Shrira (MIT)</i>	
On the Use of Synchronizers for Asynchronous Communication Networks	257
<i>K.B. Lakshmanan and K. Thulasiraman (Concordia University).</i>	
Atomic Multireader Register	278
<i>L.M. Kirousis (University of Patras & CWI Amsterdam),</i> <i>E. Kranakis and P.M.B. Vitányi (CWI Amsterdam).</i>	
An Optimistic Resiliency Control Scheme for Distributed Database Systems	297
<i>K. Vidyasankar (Memorial University of Newfoundland)</i> <i>and T. Minoura (Oregon State University).</i>	
A Failsafe Scheme for Replicated Information	310
<i>R. Kerboul (CNET Lannion), R. Kung (CNET Issy-les Moulineaux)</i> <i>and F. Richard (CNET Lannion).</i>	
Session 5. (Chairman: Shmuel Zaks)	
Randomized Function Evaluation on a Ring	324
<i>K. Abrahamson, A. Adler, L. Higham and D. Kirkpatrick</i> <i>(University of British Columbia).</i>	
A Distributed Ring Orientation Algorithm	332
<i>V. Syrotiuk and J. Pahl (University of Waterloo).</i>	
Constructing Efficient Election Algorithms from Efficient Traversal Algorithms	337
<i>H. Attiya (Hebrew University).</i>	
Optimal Resilient Ring Election Algorithms	345
<i>M.Y. Chan (University of Texas at Dallas) and F.Y.L. Chin (University of Hong Kong).</i>	
Fault-Tolerant Distributed Algorithm for Election in Complete Networks	355
<i>H.H. Abu-Amara (University of Illinois at U-C).</i>	
Lower Bounds for Synchronous Networks and the Advantage of Local Information	374
<i>R. Reischuk and M. Koshors (Technical University of Darmstadt).</i>	

Session 6. (Chairman: Jan van Leeuwen)

On the Existence of Generic Broadcast Algorithms in Networks of Communicating Sequential Processes	388
<i>L. Bougé (LIENS Paris & University of Orléans).</i>	
Stepwise Removal of Virtual Channels in Distributed Algorithms	408
<i>K. Sere (Aabo Academy)</i>	
List of Participants	429
Author Index	430