Lecture Notes in Computer Science 5873

Commenced Publication in 1973
Founding and Former Series Editors:
Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

Editorial Board

David Hutchison
Lancaster University, UK

Takeo Kanade
Carnegie Mellon University, Pittsburgh, PA, USA

Josef Kittler
University of Surrey, Guildford, UK

Jon M. Kleinberg
Cornell University, Ithaca, NY, USA

Alfred Kobsa
University of California, Irvine, CA, USA

Friedemann Mattern
ETH Zurich, Switzerland

John C. Mitchell
Stanford University, CA, USA

Moni Naor
Weizmann Institute of Science, Rehovot, Israel

Oscar Nierstrasz
University of Bern, Switzerland

C. Pandu Rangan
Indian Institute of Technology, Madras, India

Bernhard Steffen
University of Dortmund, Germany

Madhu Sudan
Microsoft Research, Cambridge, MA, USA

Demetri Terzopoulos
University of California, Los Angeles, CA, USA

Doug Tygar
University of California, Berkeley, CA, USA

Gerhard Weikum
Max-Planck Institute of Computer Science, Saarbruecken, Germany

Rachid Guerraoui Franck Petit (Eds.)

Stabilization, Safety, and Security of Distributed Systems

11th International Symposium, SSS 2009
Lyon, France, November 3-6, 2009
Proceedings

Springer

Volume Editors

Rachid Guerraoui
Ecole Polytechnique Fédérale de Lausanne
CH 1015 Lausanne, Switzerland
E-mail: rachid.guerraoui@epfl.ch

Franck Petit
LIP
ENS Lyon
46 allée d'Italie
69364 Lyon cedex 07, France
E-mail: franck.petit@ens-lyon.fr

Library of Congress Control Number: 2009936486

CR Subject Classification (1998): C.2.4, C.3, F.1, F.2.2, K.6

LNCS Sublibrary: SL 1 – Theoretical Computer Science and General Issues

ISSN 0302-9743
ISBN-10 3-642-05117-0 Springer Berlin Heidelberg New York
ISBN-13 978-3-642-05117-3 Springer Berlin Heidelberg New York

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

springer.com

© Springer-Verlag Berlin Heidelberg 2009
Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 12779949 06/3180 5 4 3 2 1 0

Preface

The papers in this volume were presented at the 11th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), held November 3–6, 2009 in Lyon, France.

SSS is an international forum for researchers and practitioners in the design and development of fault-tolerant distributed systems with self-* attributes, such as self-stabilization, self-configuration, self-organization, self-management, self-healing, self-optimization, self-adaptiveness, self-protection, etc. SSS started as the Workshop on Self-Stabilizing Systems (WSS), the first two of which were held in Austin in 1989 and in Las Vegas in 1995. Starting in 1995, the workshop began to be held biennially; it was held in Santa Barbara (1997), Austin (1999), and Lisbon (2001). As interest grew and the community expanded, in 2003, the title of the forum was changed to the Symposium on Self-Stabilizing Systems (SSS). SSS was organized in San Francisco in 2003 and in Barcelona in 2005. As SSS broadened its scope and attracted researchers from other communities, a couple of changes were made in 2006. It became an annual event, and the name of the conference was changed to the International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS). The last three SSS conferences were held in Dallas (2006), Paris (2007), and Detroit (2008).

This year the Program Committee was organized into several tracks reflecting most topics related to self-* systems. The tracks were: Alternative Systems and Models, Autonomic Computational Science, Cloud Computing, Embedded Systems, Fault-Tolerance in Distributed Systems / Dependability, Formal Methods in Distributed Systems, Grid Computing, Mobility and Dynamic Networks, Multicore Computing, Peer-to-Peer Systems, Self-Organizing Systems, Sensor Networks, Stabilization, and System Safety and Security. We received 126 submissions from 34 countries. Each submission was reviewed by four to six Program Committee members with the help of external reviewers. A rebuttal phase was added for the authors to respond to the reviews before the final deliberation. Out of the 126 submitted papers, 49 papers were selected for presentation. The symposium also included 14 brief announcements. Selected papers from the symposium will be published in a special issue of the *ACM Transactions on Autonomous and Adaptive Systems* (TAAS).

This year, we were very fortunate to have three distinguished invited speakers: Anne-Marie Kermarrec, David Peleg, and Roger Wattenhofer. They also graciously provided a summary of their talks in advance to be included in this volume.

Among the 49 selected papers, we considered three papers for special awards. The best paper award was given to François Bonnet and Michel Raynal for their paper entitled "Looking for the Weakest Failure Detector for k-Set Agreement in Message-Passing Systems: Is Π_k the End of the Road?". The best student paper

was shared by Danny Dolev, Ezra N. Hoch, and Yoram Moses for "An Optimal Self-Stabilizing Firing Squad" and Gérard Wagener, Radu State, Alexandre Dulaunoy, and Thomas Engel for "Self-Adaptive High Interaction Honeypots Driven by Game Theory."

On behalf of the Program Committee, we would like to thank all the authors who submitted their work to SSS. We thank all the Vice-Program Chairs, all the members of the Program Committee, and the external reviewers for their tremendous effort and valuable reviews. We also thank the members of the Steering Committee for their invaluable advice. The process of paper submission, selection, and compilation in the proceedings was greatly simplified due to the strong and friendly interface of the *EasyChair* system (`http://www.easychair.org`). We owe a lot to the EasyChair creators and maintainers for their commitment to the scientific community. We gratefully acknowledge the Organizing Committee members for their time and invaluable effort that greatly contributed to the success of this symposium.

November 2009

Rachid Guerraoui
Franck Petit

Conference Organization

General Chair

Ajoy K. Datta — UNLV, Las Vegas, USA

Program Chairs

Rachid Guerraoui — EPFL, Lausanne, Switzerland
Franck Petit — INRIA/LIP, ENS Lyon, France

Program Vice-Chairs

Tarek Abdelzaher
Anish Arora
Raouf Boutaba
Giovanna Di Marzo Serugendo
Pascal Felber
Christof Fetzer
Eric Fleury
Thomas Fuhrmann
Mohamed G. Gouda
Indranil Gupta
Jason Hallstrom
Salima Hassas
Ted Herman
Martin Hutle
Sandeep Kulkarni
Sayan Mitra
Manish Parashar
Franck Petit
Thierry Priol
Omer F. Rana
Josef Widder

Local Arrangements Chair

Eddy Caron

Webmaster

Benjamin Depardon

Publication Chairs

Stéphane Devismes
Cédric Tedeschi

Publicity Chairs

Doina Bein
Borzoo Bonakdarpour
Jiannong Cao
Stéphane Devismes
Yoshiaki Katayama
Ji-Cherng Lin

Program Committee

Alternative Systems and Models

Murat Demirbas
Hoai Ha Phuong
Ted Herman (*Chair*)
Mehmet Karaata
Xenofon Koutsoukos
Håkan Sundell
Paulo Tabuada
Suresh Venkatasubramanian
Lin Zhong

Autonomic Computational Science

Rosa Badia
Jose Fortes
Geoffrey Fox
Shantenu Jha
Nagarajan Kandasamy
Zhiling Lan
Manish Parashar (*Chair*)
Thierry Priol
Omer F. Rana (*Chair*)
Jordi Torres
David Walker
Dongyan Xu

Cloud Computing

Marcos Aguilera
Mahesh Balakrishnan
Gregory Chockler
Brian Cooper
John Dunagan
Indranil Gupta (*Chair*)
Anthony Joseph
Flavio Junqueira
Petr Kuznetsov
Arvind Krishnamurthy
Gopal Pandurangan
Hakim Weatherspoon
Praveen Yalagandula

Embedded Systems

Tarek Abdelzaher (*Chair*)
Karl-Erik Arzen
Hakan Aydin
Ted Baker
Riccardo Bettati
Albert Cheng
Chris Gill
Vana Kalogeraki
Insup Lee
Xue Liu
Lucia Lo Bello
Chenyang Lu
Ying Lu
Frank Mueller
Binoy Ravindran
Bruno Sinopoli
Oleg Sokolsky
Eduardo Tovar
Dakai Zhu

Fault-Tolerance in Distributed Systems / Dependability

James Anderson
Xavier Défago
Felix Freiling
Martin Hutle (*Chair*)
Ricardo Jimenez
Zbigniew Kalbarczyk
Miroslaw Malek
Achour Mostefaoui
Dave Powell
Luís E.T. Rodrigues
Nicola Santoro
Neeraj Suri
Tatsuhiro Tsuchiya
Paulo Veríssimo
Jennifer Welch
Josef Widder (*Chair*)

Formal Methods in Distributed Systems

Gul Agha
Borzoo Bonakdarpour
Ali Ebnenasir
Vijay Garg
Seth Gilbert
Sandeep Kulkarni (*Chair*)
Oded Maler
Jose Meseguer
Sayan Mitra (*Chair*)
Aditya Nori
Natarajan Shankar
Scott Smolka

Grid Computing

Artur Andrzejak
Alvaro Arenas
Jean-Pierre Banâtre
Rajkumar Buyya
Franck Cappello
Eddy Caron
José C. Cunha
Marco Danelutto
Frédéric Desprez
Thomas Fahringer
Geoffrey Fox
Paraskevi Fragopoulou
Sergei Gorlatch
Hai Jin
Dieter Kranzlmueller
Craig Lee
Norbert Meyer
Zsolt Nemeth Sztaki
Manish Parashar
Ronald H. Perrott
Thierry Priol (*Chair*)
Domenico Talia
Dora Varvarigou
Zhiwei Xu
Ramin Yahyapour
Wolfgang Ziegler

Mobility and Dynamic Networks

Stefano Basagni
Marin Bertier
Jiannong Cao
Pierluigi Crescenzi
Marcelo Dias de Amorim
Andras Farago
Eric Fleury (*Chair*)
Paola Flocchini
Pierre Fraigniaud
Seth Gilbert
Jean Loup Guillaume
Shay Kutten
Thomas Moscibroda
David Peleg

Christian Poellabauer
Violet R. Syrotiuk
Sébastien Tixeuil
Koichi Wada
Masafumi Yamashita

Multicore Computing

Andrea Acquaviva
Ali-Reza Adl-Tabatabai
Cedric Bastoul
Pascal Felber (*Chair*)
Christof Fetzer (*Chair*)
Tim Harris
Maurice Herlihy
Michael Hohmuth
Gilles Muller
Nir Shavit
Per Stenstrom
Osman Unsal

Peer-to-Peer Systems

James Aspnes
Olivier Beaumont
Giuseppe Ciaccio
Paolo Costa
Fabrice Le Fessant
Davide Frey
Thomas Fuhrmann (*Chair*)
JoAnne Holliday
Riko Jacob
Márk Jelasity
Kendy Kutzner
Massouli Laurent
Giancarlo Ruffo
Christian Scheideler
Christian Schindelhauer
Pierre Sens
Georgios Smaragdakis
Burkhard Stiller
Kurt Tutschku
Nalini Venkatasubramanian
Spyros Voulgaris
Klaus Wehrle

Self-organizing Systems

Matthias Baumgarten
Jake Beal
Yuriy Brun
Vincent Chevrier
Rogerio De Lemos
Giovanna Di Marzo Serugendo (*Chair*)
Simon Dobson
Bruce Edmonds
Carlos Gershenson
Marie-Pierre Gleizes
Michael Grottke
David Hales
Salima Hassas (*Chair*)
Christian Igel
Mark Jelasity
Anthony Karageorgos
Marco Mamei
Gero Muehl
Wolfgang Renz
Martijn Schut
Mikhail Smirnov
Aad Van Morsell
Rolf Wuertz

Sensor Networks

Anish Arora (*Chair*)
Habib M. Ammari
Jan Beutel
David Du
Jason Hallstrom (*Chair*)
Bhaskar Krishnamachari
Santosh Kumar
Chenyang Lu
Nigamanth Sridhar
Andreas Terzis
Yu-Chee Tseng
Hongwei Zhang

Stabilization

James Aspnes
Joffroy Beauquier
Doina Bein
Christian Boulinier
Alain Cournier
Sylvie Delaët
Stéphane Devismes
Shlomi Dolev
Bertrand Ducourthial
Hugues Fauconnier
Paola Flocchini
Felix Freiling
Sukumar Ghosh
Hirotsugu Kakugawa
Mehmet H. Karaata
Yoshiaki Katayama
Lawrence L. Larmore
Toshimitsu Masuzawa
Fabien Mathieu
Mikhail Nesterenko
Boaz Patt-Shamir
Franck Petit (*Chair*)
Maria Gradinariu Potop-Butucaru
Cédric Tedeschi
Sébastien Tixeuil
Vincent Villain
Masafumi Yamashita

System Safety and Security

Raouf Boutaba (*Chair*)
Jorge Cobb
Mourad Debbabi
Mohamed G. Gouda (*Chair*)
Stefanos Gritzalis
Urs Hengartner
Jiankun Hu
Chin-Tser Huang
Eunjin (E.J.) Jung
Ninghui Li
Alex X. Liu
Dan Massey
Neeraj Mittal
Refik Molva
Peter Muller
Radu State
Gene Tsudik
Carlos Becker Westphall

Steering Committee

Sukumar Ghosh
Anish Arora
Ajoy K. Datta
Shlomi Dolev
Mohamed G. Gouda
Ted Herman
Toshimitsu Masuzawa
Vincent Villain

Additional Reviewers

Hrishikesh B. Acharya
Luca Maria Aiello
Ismet Aktas
Mishari Almishari
Habib M. Ammari
Zakia Asad
Thomas Aynaud
Rosa M. Badia
Zinaida Benenson
Andrew Berns
Josep Berral
Jan Beutel
Hamad Binsalleh
Francois Bonnet
Amine Boukhetouta
Zohir Bouzid
Olga Brukman
Janna Burman
Jan Calta
Jian Chang
Xin Che
Hyun-Chul Chung
Kendra Cooper
Scott Coull
Brian DeVries
Carole Delporte
Benjamin Depardon
Yoann Dieudonné
Andreas Dittrich
Jing Dong
Swan Dubois
Yong Fu
Matthias Függer
Daniel Graff
Vincent Gramoli
Gregory Hackmann
Sammy Haddad
Rachid Hadid
Daniel Hagimont
Kai Han
Claus Hertling
Yu Hua
Shing-Tsaan Huang
Taisuke Izumi
Tomoko Izumi
Georgios Kambourakis
Sayaka Kamei
Giorgos Karopoulos
Vincent Keller
Matthew Kellett
Kyungbaek Kim
Sebastian Kniesburges
Ioannis Krontiris
Petr Kuznetsov
Hyunyoung Lee
Julien Legriel
Joao Leitao
Yawei Li
Yan Li
Peter Likarish
Jó Agila Bitsch Link
Xiaohui Liu
Miroslaw Malek
Nicolas Markey
Marco Milanesio
Neeraj Mittal
Noman Mohammed
Nicolas Nisse
Stephen Olivier
Lucia Draque Penso
Olivier Peres
Marie-Laure Potet
Giuseppe Prencipe
Michel Raynal
Ryan Riley
Yvan Rivierre
Paolo Romano
Gautam Roy
Srikanth Sastry
Gregor Schiele
Elad Michael Schiller
Stefan Schmid
Florian Schmidt
Klaus Schneider
Michael Segal
Massoud Seifi
Zubair Shafiq
John Solis
Anil Somayaji
Claudio Soriente
Srdjan Stipic
Andreas Tielmann
Peter Tröger
Kasturi Varadarajan
Kapil Vaswani
Saira Viqar
Ramesh Viswanathan
Sally Wahba
Christopher Weyer
Qiao Xiang
Alex Yakovlev
Yukiko Yamauchi
Ziming Zheng
Liu Xuan

Table of Contents

Invited Talks

Challenges in Personalizing and Decentralizing the Web: An Overview of GOSSPLE 1
Anne-Marie Kermarrec

Local Algorithms: Self-stabilization on Speed 17
Christoph Lenzen, Jukka Suomela, and Roger Wattenhofer

As Good as It Gets: Competitive Fault Tolerance in Network Structures 35
David Peleg

Regular Papers

Multicore Constraint-Based Automated Stabilization 47
Fuad Abujarad and Sandeep S. Kulkarni

A Theory of Network Tracing 62
Hrishikesh B. Acharya and Mohamed G. Gouda

Developing Autonomic and Secure Virtual Organisations with Chemical Programming 75
Alvaro E. Arenas, Jean-Pierre Banâtre, and Thierry Priol

Making Population Protocols Self-stabilizing 90
Joffroy Beauquier, Janna Burman, and Shay Kutten

Analysis of Wireless Sensor Network Protocols in Dynamic Scenarios . . . 105
Cinzia Bernardeschi, Paolo Masci, and Holger Pfeifer

Consensus When All Processes May Be Byzantine for Some Time 120
Martin Biely and Martin Hutle

A Superstabilizing $\log(n)$-Approximation Algorithm for Dynamic Steiner Trees 133
Lélia Blin, Maria Gradinariu Potop-Butucaru, and Stephane Rovedakis

Looking for the Weakest Failure Detector for k-Set Agreement in Message-Passing Systems: Is Π_k the End of the Road? 149
François Bonnet and Michel Raynal

Optimal Byzantine Resilient Convergence in Asynchronous Robot Networks 165
Zohir Bouzid, Maria Gradinariu Potop-Butucaru, and Sébastien Tixeuil

FoG: Fighting the Achilles' Heel of Gossip Protocols with Fountain Codes 180
Mary-Luc Champel, Anne-Marie Kermarrec, and Nicolas Le Scouarnec

How to Improve Snap-Stabilizing Point-to-Point Communication Space Complexity? 195
Alain Cournier, Swan Dubois, and Vincent Villain

Fault-Containment in Weakly-Stabilizing Systems 209
Anurag Dasgupta, Sukumar Ghosh, and Xin Xiao

Stability of Distributed Algorithms in the Face of Incessant Faults 224
Robert E. Lee DeVille and Sayan Mitra

Dependability Engineering of Silent Self-stabilizing Systems 238
Abhishek Dhama, Oliver Theel, Pepijn Crouzen, Holger Hermanns, Ralf Wimmer, and Bernd Becker

Robustness and Dependability of Self-Organizing Systems - A Safety Engineering Perspective 254
Giovanna Di Marzo Serugendo

Efficient Robust Storage Using Secret Tokens 269
Dan Dobre, Matthias Majuntke, Marco Serafini, and Neeraj Suri

An Optimal Self-stabilizing Firing Squad 284
Danny Dolev, Ezra N. Hoch, and Yoram Moses

Anonymous Transactions in Computer Networks (Extended Abstract) 297
Shlomi Dolev and Marina Kopeetsky

Nash Equilibria in Stabilizing Systems 311
Mohamed G. Gouda and Hrishikesh B. Acharya

ACCADA: A Framework for Continuous Context-Aware Deployment and Adaptation 325
Ning Gui, Vincenzo De Florio, Hong Sun, and Chris Blondia

A Self-stabilizing Approximation Algorithm for Vertex Cover in Anonymous Networks 341
Volker Turau and Bernd Hauck

Separation of Circulating Tokens 354
Kajari Ghosh Dastidar and Ted Herman

Visiting Gafni's Reduction Land: From the BG Simulation to the Extended BG Simulation 369
Damien Imbs and Michel Raynal

Randomized Gathering of Mobile Robots with Local-Multiplicity Detection 384
Taisuke Izumi, Tomoko Izumi, Sayaka Kamei, and Fukuhito Ooshita

Scalable P2P Overlays of Very Small Constant Degree: An Emerging Security Threat 399
Márk Jelasity and Vilmos Bilicki

CFlood: A Constrained Flooding Protocol for Real-time Data Delivery in Wireless Sensor Networks 413
Bo Jiang, Binoy Ravindran, and Hyeonjoong Cho

Cached Sensornet Transformation of Non-silent Self-stabilizing Algorithms with Unreliable Links 428
Hirotsugu Kakugawa, Yukiko Yamauchi, Sayaka Kamei, and Toshimitsu Masuzawa

Analysis of an Intentional Fault Which Is Undetectable by Local Checks under an Unfair Scheduler 443
Jun Kiniwa and Kensaku Kikuta

Exploring Polygonal Environments by Simple Robots with Faulty Combinatorial Vision 458
Anvesh Komuravelli and Matúš Mihalák

Finding Good Partners in Availability-Aware P2P Networks 472
Stevens Le Blond, Fabrice Le Fessant, and Erwan Le Merrer

Churn-Resilient Replication Strategy for Peer-to-Peer Distributed Hash-Tables 485
Sergey Legtchenko, Sébastien Monnet, Pierre Sens, and Gilles Muller

Distributed Power Control with Multiple Agents in a Distributed Base Station Scheme Using Macrodiversity 500
Philippe Leroux and Sébastien Roy

Redundancy Maintenance and Garbage Collection Strategies in Peer-to-Peer Storage Systems 515
Xin Liu and Anwitaman Datta

Model Checking Coalition Nash Equilibria in MAD Distributed Systems 531
Federico Mari, Igor Melatti, Ivano Salvo, Enrico Tronci, Lorenzo Alvisi, Allen Clement, and Harry Li

OpenMP Support for NBTI-Induced Aging Tolerance in MPSoCs 547
Andrea Marongiu, Andrea Acquaviva, and Luca Benini

A Self-stabilizing Algorithm for Graph Searching in Trees 563
Rodica Mihai and Morten Mjelde

A Metastability-Free Multi-synchronous Communication Scheme for SoCs 578
Thomas Polzer, Thomas Handl, and Andreas Steininger

From Local Impact Functions to Global Adaptation of Service Compositions 593
Liliana Rosa, Luís Rodrigues, Antónia Lopes, Matti Hiltunen, and Richard Schlichting

A Wireless Security Framework without Shared Secrets 609
Lifeng Sang and Anish Arora

Read-Write-Codes: An Erasure Resilient Encoding System for Flexible Reading and Writing in Storage Networks 624
Mario Mense and Christian Schindelhauer

Distributed Sleep Scheduling in Wireless Sensor Networks via Fractional Domatic Partitioning 640
André Schumacher and Harri Haanpää

Network-Friendly Gossiping 655
Sabina Serbu, Étienne Rivière, and Pascal Felber

Black Hole Search with Tokens in Interconnected Networks 670
Wei Shi

Oracle-Based Flocking of Mobile Robots in Crash-Recovery Model 683
Samia Souissi, Taisuke Izumi, and Koichi Wada

Speculation for Parallelizing Runtime Checks 698
Martin Süßkraut, Stefan Weigert, Ute Schiffel, Thomas Knauth, Martin Nowack, Diogo Becker de Brum, and Christof Fetzer

Optimistic Fair Exchange Using Trusted Devices 711
Mohammad Torabi Dashti

Application Data Consistency Checking for Anomaly Based Intrusion Detection 726
Olivier Sarrouy, Eric Totel, and Bernard Jouga

Self Adaptive High Interaction Honeypots Driven by Game Theory 741
Gérard Wagener, Radu State, Alexandre Dulaunoy, and Thomas Engel

Cooperative Autonomic Management in Dynamic Distributed Systems 756
Jing Xu, Ming Zhao, and José A.B. Fortes

Brief Announcements

Consistent Fixed Points and Negative Gain 771
Hrishikesh B. Acharya, Ehab S. Elmallah, and Mohamed G. Gouda

Induced Churn to Face Adversarial Behavior in Peer-to-Peer Systems ... 773
Emmanuelle Anceaume, Francisco Brasileiro, Romaric Ludinard, Bruno Sericola, and Frederic Tronel

Safer Than Safe: On the Initial State of Self-stabilizing Systems 775
Sylvie Delaët, Shlomi Dolev, and Olivier Peres

Unique Permutation Hashing 777
Shlomi Dolev, Limor Lahiani, and Yinnon Haviv

Randomization Adaptive Self-stabilization 779
Shlomi Dolev and Nir Tzachar

On the Time Complexity of Distributed Topological Self-stabilization ... 781
Dominik Gall, Riko Jacob, Andrea Richa, Christian Scheideler, Stefan Schmid, and Hanjo Täubig

An OS Architecture for Device Self-protection 783
Ruan He, Marc Lacoste, and Jean Leneutre

Towards Secure Cloud Computing 785
Christian Henrich, Matthias Huber, Carmen Kempka, Jörn Müller-Quade, and Mario Strefler

Robust Self-stabilizing Construction of Bounded Size Weight-Based Clusters 787
Colette Johnen and Fouzi Mekhaldi

A Stabilizing Algorithm for Finding Two Disjoint Paths in Arbitrary Networks 789
Mehmet Hakan Karaata and Rachid Hadid

Relocation Analysis of Stabilizing MAC Algorithms for Large-Scale Mobile Ad Hoc Networks 791
Pierre Leone, Marina Papatriantafilou, and Elad M. Schiller

A Simple and Quiescent Omega Algorithm in the Crash-Recovery Model 793
Cristian Martín and Mikel Larrea

How to Overcome the Limits of Bounds 795
Olivier Peres

The Design and Evaluation of a Distributed Reliable File System 797
Dalibor Peric, Thomas Bocek, Fabio Hecht, David Hausheer, and Burkhard Stiller

Author Index 799