

Table of Contents

Logic Programming (Session 1)

M. Gabbriellini and G. Levi <i>On the Semantics of Logic Programs (Invited Lecture)</i>	1
Hong Chen and Jieh Hsiang <i>Logic Programming with Recurrence Domains</i>	20

Functional Programming (Session 2)

A. Bucciarelli and T. Ehrhard <i>Extensional Embedding of a Strongly Stable Model of PCF</i>	35
C. Ernoult and A. Mycroft <i>Uniform Ideals and Strictness Analysis</i>	47
V. Breazu-Tannen and R. Subrahmanyam <i>Logical and Computational Aspects of Programming with Sets/Bags/Lists</i>	60

Specification and Verification (Session 3)

A. Bouajjani, J.C. Fernández, S. Graf, C. Rodríguez and J. Sifakis <i>Safety for Branching Time Semantics</i>	76
L. Fix, N. Francez and O. Grumberg <i>Program Composition and Modular Verification</i>	93
R. Alur, C. Courcoubetis and D. Dill <i>Model-checking for Probabilistic Real-time Systems</i>	115
R. Cleaveland and B. Steffen <i>Computing Behavioural Relations, Logically</i>	127

Complexity (Session 4)

Y. Ben-Asher, D. Peleg, R. Ramaswami and A. Schuster <i>The Power of Reconfiguration</i>	139
J.-D. Fouks <i>General Resolution of Tseitin Formulas is Hard</i>	151
S. Kannan and A. Yao <i>Program Checkers for Probability Generation</i>	163
J. Kaneps and R. Freivalds <i>Running Time to Recognize Nonregular Languages by 2-Way Probabilistic Automata</i>	174

Complexity and Concurrency (Session 5)

R. Casas, J. Díaz and C. Martínez <i>Statistics on Random Trees (Invited Lecture)</i>	186
K.G. Larsen <i>The Expressive Power of Implicit Specifications</i>	204
Wang Yi <i>CCS+Time = an Interleaving Model for Real Time Systems</i>	217

Formal Languages (Session 6)

V. Diekert, E. Ochmanski and K. Reinhardt <i>On Confluent Semi-Commutations-Decidability and Complexity Results</i>	229
G. Duchamp and D. Krob <i>Lazard's Factorizations of Free Partially Commutative Monoids</i>	242
P. Gastin, A. Petit and W. Zielonka <i>A Kleene Theorem for Infinite Trace Languages</i>	254

Rewriting and Logic (Session 7)

N. Dershowitz <i>Canonical Sets of Horn Clauses</i>	267
K. Madlener, P. Narendran and F. Otto <i>A Specialized Completion Procedure for Monadic String-Rewriting Systems Presenting Groups</i>	279
P.-L. Curien and R. Di Cosmo <i>A Confluent Reduction for the λ-Calculus with Surjective Pairing and Terminal Object</i>	291
T. Fernando <i>Provably Recursive Programs and Program Extraction</i>	303

Graph Algorithms (Session 8)

T. Lengauer and D. Theune <i>Efficient Algorithms for Path Problems with General Cost Criteria</i>	314
H.N. Djidjev, G.E. Pantziou and C.D. Zaroliagis <i>Computing Shortest Paths and Distances in Planar Graphs</i>	327
Z. Galil and G.F. Italiano <i>Maintaining Biconnected Components of Dynamic Planar Graphs</i>	339
M. Loeb <i>Efficient Maximal Cubic Graph Cuts</i>	351

Complexity (Session 9)

U. Vishkin <i>Structural Parallel Algorithmics (Invited Lecture)</i>	363
D. Ranjan, S. Chari and P. Rohatgi <i>Improving Known Solutions is Hard</i>	381
L.A. Hemachandra and A. Hoene <i>Collapsing Degrees via Strong Computation</i>	393

Parallel Algorithms (Session 10)

T. Hagerup <i>Fast Parallel Generation of Random Permutations</i>	405
H. Jung, M. Serna and P. Spirakis <i>A Parallel Algorithm for two Processors Precedence Constraint Scheduling</i>	417
M. Fürer and B. Raghavachari <i>An Efficient NC Algorithm for Finding Hamiltonian Cycles in Dense Directed Graphs</i>	429

Logic in Computer Science (BRA session) (Session 11)

W. Thomas <i>On Logics, Tilings, and Automata (Invited Lecture)</i>	441
J.-P. Jouannaud and M. Okada <i>Satisfiability of Systems of Ordinal Notations with the Subterm Property is Decidable</i>	455
H. Comon <i>Complete Axiomatizations of some Quotient Term Algebras</i>	469

Concurrency (BRA session) (Session 12)

R. Bol and J. F. Groote <i>The Meaning of Negative Premises in Transition System Specifications</i>	481
W. Vogler <i>Deciding History Preserving Bisimilarity</i>	495
L. Aceto and M. Hennessy <i>Adding Action Refinement to a Finite Process Algebra</i>	506

Algorithms (Session 13)

D. Bini, L. Gemignani and V. Pan <i>Improved Parallel Computations with Matrices and Polynomials</i>	520
J. Lagergren and S. Arnborg <i>Finding Minimal Forbidden Minors Using a Finite Congruence</i>	532
H. L. Bodlaender and T. Kloks <i>Better Algorithms for the Pathwidth and Treewidth of Graphs</i>	544
F. Cucker and A. Torrecillas <i>Two P-complete Problems in the Theory of the Reals</i>	556

Formal Languages (Session 14)

J. Honkala and A. Salomaa <i>L Morphisms: Bounded Delay and Regularity of Ambiguity</i>	566
V. Bruyere and C. de Felice <i>Degree et Decomposability of Variable-Length Codes</i>	575
T. Wilke <i>An EILLENBERG Theorem for ∞-Languages</i>	588
K. Culik II and S. Dube <i>Balancing Order and Chaos in Image Generation</i>	600

Formal Languages and Complexity (Session 15)

Y. Gurevich <i>Average Case Complexity (Invited Lecture)</i>	615
Tao Jiang and B. Ravikumar <i>Minimal NFA Problems are Hard</i>	629
K. Hashiguchi <i>Algorithms for Determining the Smallest Number of Nonterminals (States) Sufficient for Generating (Accepting) a Regular Language</i>	641

Computational Geometry (Session 16)

B. Bhattacharya and G. Toussaint <i>Computing Shortest Transversals</i>	649
B. Chazelle, H. Edelsbrunner, M. Grigni, L. Guibas, J. Hershberger, M. Sharir and J. Snoeyink <i>Ray Shooting in Polygons Using Geodesic Triangulations</i>	661
M. Bern, D. Eppstein and F. Yao <i>The Expected Extremes in a Delaunay Triangulation</i>	674

Complexity and Computational Geometry (Session 17)

B. Chazelle <i>Computational Geometry for the Gourmet: Old Fare and New Dishes (Invited Lecture)</i>	686
P. Duris and Z. Galil <i>On the Power of Multiple Reads in a Chip</i>	697
H.D. Gröger and G. Turán <i>On Linear Decision Trees Computing Boolean Functions</i>	707

Algorithms (Session 18)

Z. Galil and O. Margalit <i>An Almost Linear-Time Algorithm for the Dense Subset-Sum Problem</i>	719
S. Khuller, S.G. Mitchell and V.V. Vazirani <i>On-line Algorithms for Weighted Bipartite Matching and Stable Marriages</i>	728
M. Naor <i>String Matching with Preprocessing of Text and Pattern</i>	739
R. Ravi, A. Agrawal and P. Klein <i>Ordering Problems Approximated: Single-Processor Scheduling and Interval Graph Completion</i>	751
Author Index	763