Contents

Session Random 1 Completeness and Robustness Properties of Min-Wise Independent Permutations	1
Andrei Z. Broder and Michael Mitzenmacher Low Discrepancy Sets Yield Approximate Min-Wise Independent	11
Permutation Families Michael Saks, Aravind Srinivasan, Shiyu Zhou and David Zuckerman	
Session Approx 1 Independent Sets in Hypergraphs with Applications to Routing via Fixed Paths Noga Alon, Uri Arad and Yossi Azar	16
Approximating Minimum Manhattan Networks Joachim Gudmundsson, Christos Levcopoulos and Giri Narasimhan	28
Approximation of Multi-color Discrepancy Benjamin Doerr and Anand Srivastav	39
A Polynomial Time Approximation Scheme for the Multiple Knapsack Problem Hans Kellerer	51
Session Approx 2 Set Cover with Requirements and Costs Evolving over Time Milena Mihail	63
Multicoloring Planar Graphs and Partial k-Trees Magnús M. Halldórsson and Guy Kortsarz	73
Session: Random 2 Testing the Diameter of Graphs Michal Parnas and Dana Ron	85
Improved Testing Algorithms for Monotonicity Yevgeniy Dodis, Oded Goldreich, Eric Lehman, Sofya Raskhodnikova, Dana Ron and Alex Samorodnitsky	97
Linear Consistency Testing Yonatan Aumann, Johan Håstad, Michael O. Rabin and Madhu Sudan	109
Improved Bounds for Sampling Contingency Tables Benjamin James Morris	121

Invited Talk Probabilistic and Deterministic Approximations of the Permanent Avi Wigderson	130
Session Random 3 Improved Derandomization of BPP Using a Hitting Set Generator Oded Goldreich and Avi Wigderson	131
Probabilistic Construction of Small Strongly Sum-Free Sets via Large Sidon Sets Andreas Baltz, Tomasz Schoen and Anand Srivastav	138
Session Approx 3 Stochastic Machine Scheduling: Performance Guarantees for LP-based Priority Policies Rolf H. Möhring, Andreas S. Schulz and Marc Uetz	144
Efficient Redundant Assignments under Fault-Tolerance Constraints Dimitris A. Fotakis and Paul G. Spirakis	156
Scheduling with Machine Cost Csanád Imreh and John Noga	168
A Linear Time Approximation Scheme for the Job Shop Scheduling Problem Klaus Jansen, Roberto Solis-Oba and Maxim Sviridenko	177
Invited Talk Randomized Rounding for Semidefinite Programs - Variations on the MAX CUT Example Uriel Feige	189
Session Approx 4 Hardness Results for the Power Range Assignment Problem in Packet Radio Networks Andrea E. F. Clementi, Paolo Penna and Riccardo Silvestri	197
A New Approximation Algorithm for the Demand Routing and Slotting Problem with Unit Demands on Rings Christine T. Cheng	209

	Contents	IX
Session Random 4 Algorithms for Graph Partitioning on the Planted Partition Anne E. Condon and Richard M. Karp	Model	221
A Randomized Time-Work Optimal Parallel Algorithm for F a Minimum Spanning Forest Seth Pettie and Vijaya Ramachandran	inding	233
Fast Approximate PCPs for Multidimensional Bin-Packing Fast Approximate PCPs for Multidimension PCPs for Multidimension PCPs for Multidimension PCPs for Multidimension PCPs for	Problems	245
Pfaffian Algorithms for Sampling Routings on Regions with Boundary Conditions Russell A. Martin and Dana Randall	Free	257
Minisymposium on Scheduling Talks Organizer Klaus Jansen		
Scheduling with Unexpected Machine Breakdowns Susanne Albers and Günter Schmidt		269
Scheduling on a Constant Number of Machines F. Afrati, E. Bampis, C. Kenyon and I. Milis		281
Author Index		289