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Algorithms and Techniques

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Preface

This volume contains the papers presented at the 13th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2010) and the 14th International Workshop on Randomization and Computation (RANDOM 2010), which took place concurrently in Universitat Politècnica de Catalunya (UPC) Barcelona, Spain, during September 1–3, 2010. APPROX focuses on algorithmic and complexity issues surrounding the development of efficient approximate solutions to computationally difficult problems, and was the 13th in the series after Aalborg (1998), Berkeley (1999), Saarbrücken (2000), Berkeley (2001), Rome (2002), Princeton (2003), Cambridge (2004), Berkeley (2005), Barcelona (2006), Princeton (2007), Boston (2008) and Berkeley (2009). RANDOM is concerned with applications of randomness to computational and combinatorial problems, and was the 14th workshop in the series following Bologna (1997), Barcelona (1998), Berkeley (1999), Geneva (2000), Berkeley (2001), Harvard (2002), Princeton (2003), Cambridge (2004), Berkeley (2005), Barcelona (2006), Princeton (2007), Boston (2008), and Berkeley (2009).

Topics of interest for APPROX and RANDOM are: design and analysis of approximation algorithms, hardness of approximation, small space algorithms, sub-linear time algorithms, streaming algorithms, embeddings and metric space methods, mathematical programming methods, combinatorial problems in graphs and networks, game theory, markets and economic applications, geometric problems, packing, covering, scheduling, approximate learning, design and analysis of randomized algorithms, randomized complexity theory, pseudorandomness and derandomization, random combinatorial structures, random walks/Markov chains, expander graphs and randomness extractors, probabilistic proof systems, random projections and embeddings, error-correcting codes, average-case analysis, property testing, computational learning theory, and other applications of approximation and randomness.

The volume contains 28 contributed papers, selected by the APPROX Program Committee out of 66 submissions, and 29 contributed papers, selected by the RANDOM Program Committee out of 61 submissions.

We would like to thank all of the authors who submitted papers and the members of the Program Committees, and the external Reviewers.

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September 2010

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