

Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques

19th International Workshop, APPROX 2016, and
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Edited by

Klaus Jansen

Claire Mathieu

José D. P. Rolim

Chris Umans



Editors

Klaus Jansen
University of Kiel
Kiel, Germany
kj@informatik.uni-kiel.de

Claire Mathieu
CNRS, Ecole Normale Supérieure
Paris, France
cmathieu@di.ens.fr

João Rolim
University of Geneva
Geneva, Switzerland
Jose.Rolim@unige.ch

Chris Umans
California Institute of Technology
Pasadena, CA, USA
umans@cs.caltech.edu

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■ Preface

This volume contains the papers presented at the 19th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2016) and the 20th International Workshop on Randomization and Computation (RANDOM 2016), which took place concurrently at the Institut Henri Poincaré in Paris, France during September 7–9, 2016.

APPROX focuses on algorithmic and complexity issues surrounding the development of efficient approximate solutions to computationally difficult problems, and was the 19th 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), Berkeley (2009), Barcelona (2010), Princeton (2011), Boston (2012), Berkeley (2013), Barcelona (2014), and Princeton (2015). RANDOM is concerned with applications of randomness to computational and combinatorial problems, and was the 20th 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), Berkeley (2009), Barcelona (2010), Princeton (2011), Boston (2012), Berkeley (2013), Barcelona (2014), and Princeton (2015).

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, spectral methods, mathematical programming methods, combinatorial optimization in graphs and networks, algorithmic game theory, mechanism design and economics, computational geometric problems, distributed and parallel approximation, approximate learning, online algorithms, approaches that go beyond worst case analysis, 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 20 contributed papers, selected by the APPROX Program Committee out of 40 submissions, and 27 contributed papers, selected by the RANDOM Program Committee out of 45 submissions.

We would like to thank all of the authors who submitted papers, the invited speakers, the members of the Program Committees, and the external reviewers. We gratefully acknowledge the Institute of Computer Science of the Christian-Albrechts-Universität zu Kiel, the Computer Science Department of École normale Supérieure, the Department of Computer Science of the University of Geneva, and the Computing and Mathematical Sciences Department at Caltech.

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