

Foreword

The Workshop on *Approximation Algorithms for Combinatorial Optimization Problems* **APPROX 2002** focused on algorithmic and complexity aspects arising in the development of efficient approximate solutions to computationally difficult problems. It aimed, in particular, to foster cooperation among algorithmic and complexity researchers in the field. The workshop, held at the University of Rome La Sapienza, Rome, Italy, was part of the ALGO 2002 event, in conjunction with ESA 2002 and WABI 2002. We would like to thank the local organizers at the University of Rome La Sapienza for this opportunity. APPROX is an annual meeting, with previous workshops in Aalborg, Berkeley, Saarbrücken, and Berkeley. Previous proceedings appeared as LNCS 1444, 1671, 1913, and 2129.

Topics of interest for APPROX 2002 were: design and analysis of approximation algorithms, inapproximability results, on-line problems, randomization techniques, average-case analysis, approximation classes, scheduling problems, routing and flow problems, coloring and partitioning, cuts and connectivity, packing and covering, geometric problems, network design, applications to game theory, and other applications. The number of submitted papers to APPROX 2002 was 54 from which 20 papers were selected. This volume contains the selected papers together with abstracts of invited lectures by Yuval Rabani (Technion) and R. Ravi (CMU). All papers published in the workshop proceedings were selected by the program committee on the basis of referee reports. Each paper was reviewed by at least three referees who judged the papers for originality, quality, and consistency with the topics of the conference.

We would like to thank all the authors who responded to the call for papers and our invited speakers Y. Rabani and R. Ravi. Furthermore, we thank the members of the program committee:

- Giorgio Ausiello, Rome
- Josep Diaz, Barcelona
- Ashish Goel, USC
- Ravi Kannan, Yale
- Sanjeev Khanna, UPenn
- Elias Koutsoupias, UCLA
- Ion Mandoiu, UCSD
- Kurt Mehlhorn, Saarbrücken
- Yuval Rabani, Technion
- Eva Tardos, Cornell
- Vijay Vazirani, Georgia Tech
- Gerhard Woeginger, Twente University
- Alexander Zelikovsky, Georgia State

and the subreferees Dimitris Achlioptas, Luca Becchetti, Piotr Berman, Grigori Calinescu, Eranda Cela, Chandra Chekuri, Julia Chuzhoy, W. Fernandez de la

Vega, Mathias Hauptmann, Volkan Isler, Marek Karpinski, Stefano Leonardi, Alberto Marchetti Spaccamela, Yakov Nekritch, Rudi Pendavingh, Jordi Petit i Silvestre, Kirk Pruhs, Amin Saberi, Jiri Sgall, and Luca Trevisan.

We gratefully acknowledge sponsorship from the University of Rome La Sapienza, Rome, the EU Thematic Network APPOL *Approximation and On-line Algorithms*, and the DFG Graduiertenkolleg *Effiziente Algorithmen and Mehrskalmethoden* at the University of Kiel. We also thank Parvaneh Karimi-Massouleh, Marian Margraf, and Brigitte Preuss of the research group Theory of Parallelism at the University of Kiel, and Alfred Hofmann and Judith Freudenberger of Springer-Verlag for supporting our project.

July 2002

Klaus Jansen and Stefano Leonardi, Workshop Chairs
Vijay V. Vazirani, APPROX 2002 Program Chair