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Combinatorial Algorithms

20th International Workshop, IWOCA 2009
Hradec nad Moravicí, Czech Republic, June 28–July 2, 2009
Revised Selected Papers

Springer

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Preface

The 20th International Workshop on Combinatorial Algorithms was held during June 28 – July 2, 2009 in the picturesque castle of Hradec nad Moravicí, located in the north-east corner of the Czech Republic.

IWOCA — the workshop that originated 19 years ago as AWOCA — made a big step towards globalization this year. After 19 conferences held in Australia, Indonesia, Korea, and Japan, the 20th anniversary was celebrated by taking the conference outside the Australasian region for the first time. Another novelty this year was that the proceedings are being published by Springer in the LNCS series.

Our Call for Papers brought an overwhelming response of the combinatorial community. IWOCA 2009 received over 100 submissions, more than twice the amount it received before. Most of the submissions were of exceptionally high quality and thus the Program Committee was faced with hard work and sometimes hard decisions. Many very good papers had to be rejected because of the limited capacity of the conference schedule. In the end, 41 contributed talks were presented during the conference — the maximum number that we could fit in the program.

We would like to thank all who sent their submissions and to congratulate all the authors of the accepted papers. They contributed to what was a most successful conference. We also thank all the authors who submitted posters for the poster session (not included in the proceedings).

We extend special thanks to the distinguished invited speakers. We believe that we offered the participants a rich selection of plenary speakers who are all well-known experts in the area of algorithmic combinatorics and graph theory. Sue Whitesides introduced the issues of computational geometry. Giovanni Manzini gave a splendid overview of data compression algorithms on strings and trees. Robin Thomas revealed intriguing details of clique minors in highly connected graphs. Mike Fellows, one of the founders of fixed parameter complexity theory, surveyed recent progress in this area of theoretical computer science. A cherry on the cake was undoubtedly the participation by Jack Edmonds, the guru of algorithmic mathematics. We were very happy that Jack accepted our invitation and agreed to give an honorary lecture on branching systems, with glimpses of matching and matroid theory as well as lush memories of the early days of combinatorial optimization. We trust that the special setting of Jack's lecture in the historical premises of the castle was a fitting gift for his recent 75th birthday. Jack's interaction with other participants during scientific discussions and social events was one of the highlights of the conference.

We were very pleased to see a large number of students and young researchers among the participants at IWOCA 2009. For the first time in the history of IWOCA, the PC considered awarding a prize for the best student paper. How-

ever, since the quality of the top three student papers was uniformly very high, it was decided to share the prize (sponsored by DIMATIA Charles University) between the authors of these papers. We extend our congratulations to Thomas Feierl for his paper "The Height and Range of Watermelons Without Wall," to Paweł Gawrychowski and Travis Gagie for "Minimax Trees in Linear Time with Applications," and to Petr Škoda for "Computability of Branch-Width of Submodular Partition Functions".

We thank all the members of the Program Committee, all referees and all the members of the Organizing Committee for all the hard work they have done. While all committee members worked well as a team, some names must be singled out: Special thanks go to Yuqing Lin for editing the proceedings that were made available during the conference, to Alan Gibbons and Joe Ryan for organizing the problem session (see graphtheorygroup.com/iwocaproblems.html), and to Dalibor Fronček and Petr Kovář for the exceptionally successful running of the local organization. We also gratefully acknowledge sponsorship of the conference and preparation of the proceedings by Czech research grants 1M0545 and MSM0021620838.

August 2009

Jiří Fiala
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