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Structural Information and Communication Complexity

16th International Colloquium, SIROCCO 2009
Piran, Slovenia, May 25-27, 2009
Revised Selected Papers

Springer

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Preface

These are the proceedings of SIROCCO 2009: the 16th annual Colloquium on Structure, Information, Communication, and Complexity. SIROCCO is devoted to the study of the interplay and trade-offs between the efficiency of decentralized algorithms and systems and the availability of information.

Over the years, the colloquium has become a widely recognized forum, bringing together researchers interested in the fundamental principles underlying the interplay between local knowledge and global complexity. It has a tradition of interesting and productive scientific meetings in a relaxed and pleasant atmosphere, attracting leading researchers in a variety of fields which exhibit such interplay.

This means that SIROCCO addresses topics in areas such as distributed computing, parallel computing, game theory, social networks, networking, mobile computing, peer to peer systems, communication complexity, combinatorial optimization, etc. Some of the topics in these areas are compact data structures, information dissemination, informative labeling schemes, distributed scheduling, wireless networks and scheduling of transmissions, routing, broadcasting, localization, and others.

SIROCCO 2009 was held in Piran, Slovenia, on the Adriatic. There were 53 contributions submitted to SIROCCO 2009. The submissions underwent a thorough refereeing process, where each submission was reviewed by four members of the Program Committee. After in-depth discussions, the Program Committee selected 23 high-quality contributions for presentation at the colloquium and publication in this volume. Separately, four posters were also presented (but they are not included in these proceedings). We thank the authors of all the submitted papers, the Program Committee members, and the external reviewers. Without their dedication, we could not have prepared a program of such quality.

There were two invited speakers: Israel Cidon (the Technion) and Leszek A. Gasieniec (University of Liverpool).

This year, the SIROCCO Prize for Innovation in Distributed Computing was awarded for the first time. The prize was given to Nicola Santoro for his overall contribution on the analysis of the labeled graph properties, which has been shown to have a significant impact on computability and complexity in systems of communicating entities. These contributions include the notions of "implicit routing," "sense of direction," and "topological awareness." They were illustrated by several papers, including his 1994 SIROCCO paper.

We express our gratitude to the SIROCCO Steering Committee, and in particular to Pierre Fraigniaud for his enthusiasm and his invaluable help throughout the preparation of this event.

We are in a great debt to Igor Pesek who helped in many ways, including handling the website and EasyChair. Petra Šparl was also very instrumental in making SIROCCO 2009 a success.

We acknowledge the use of the EasyChair system for handling the submission of papers, managing the refereeing process, and generating these proceedings.

August 2009

Shay Kutten
Janez Žerovnik

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