

10th International Symposium on Parameterized and Exact Computation

IPEC'15, September 16–18, 2015, Patras, Greece

Edited by

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■ Preface

This volume contains the papers presented at IPEC 2015: the 10th International Symposium on Parameterized and Exact Computation held during September 16–18, 2015, in Patras, Greece. IPEC was held together with seven other algorithms conferences as part of the annual ALGO congress.

The International Symposium on Parameterized and Exact Computation (IPEC, formerly IWPEC) is a series of international symposia covering research in all aspects of parameterized and exact algorithms and complexity. Started in 2004 as a biennial workshop, it became an annual event in 2009.

In response to the call for papers, 51 papers were submitted. Each submission was reviewed by at least 3 reviewers. The reviews came from the 14 members of the program committee, and from 56 external reviewers contributing 65 external reviews. The program committee held electronic meetings through the EasyChair.

The program committee felt that the median submission quality was very high, and in the end selected 32 of the submissions for presentation at the symposium and for inclusion in this proceedings volume. This is a record number of talks for IPEC and resulted in three well-attended conference days with a tight schedule of contributed presentations that provided rich opportunities for many researchers to meet and interact. We hope that future symposia can maintain this level both of quality and fruitful interactions.

The program committee presented the IPEC 2015 Excellent Student Paper award to Stefan Kratsch and Manuel Sorge for their paper *On Kernelization and Approximation for the Vector Connectivity Problem*.

IPEC invited two plenary speakers to the ALGO meeting, which served as opportunities to present IPEC-related results and concepts to a wider algorithmic audience. Dimitrios Thilikos spoke on *Bidimensionality and Parameterized Algorithms*, as part of the award ceremony for the 2015 EATCS–IPEC Nerode Prize for outstanding papers in the area of multivariate algorithmics. The award was given by a committee consisting of David Eppstein, Jan Arne Telle, and Georg Gottlob to the authors Eric D. Demaine, Fedor V. Fomin, Mohammadtaghi Hajiaghayi, and Dimitrios M. Thilikos of the paper *Subexponential Parameterized Algorithms on Bounded-Genus Graphs and H-Minor-Free Graphs* [J. ACM **52** (6), 2005]. The other plenary talk was given by Virginia Vassilevska Williams, on *Hardness of Easy Problems: Basing Hardness on Popular Conjectures such as the Strong Exponential Time Hypothesis*, surveying a highly successful line of current research connecting some of the hardness concepts developed in exponential-time complexity to polynomial-time computation. We thank the speakers for accepting our invitation, and for contributing accessible survey papers to this proceedings volume.

The steering committee of IPEC has decided to move the publication of the IPEC proceedings to an open access model. IPEC 2015 is the first year of producing the proceedings under this model. This transition leads to a re-distribution in workload and responsibilities compared to earlier years. While we feel that a large part of the research community supports the move to an open-access model, it has also become clear during the production

Previous IPECs

2004	Bergen, Norway
2006	Zürich, Switzerland
2008	Victoria, Canada
2009	Copenhagen, Denmark
2010	Chennai, India
2011	Saarbrücken, Germany
2012	Ljubljana, Slovenia
2013	Sophia Antipolis, France
2014	Wrocław, Poland



of these proceedings that many authors are reluctant to accept the increased demands on individual responsibility and discipline in paper production that this shift entails. For 2015, the transition significantly increased the workload of the program committee chairs, but we hope that the community can adapt to these changes in the future. We extend our sincere thanks to those authors who invested time to adhere to our instructions for paper production.

We hope that the research presented in the current proceedings will eventually appear in final form in an appropriate journal. In fact, we have invited a number of contributions to IPEC 2015 to a special issue of the journal *Algorithmica*, where we serve as editors.

We would like to thank the program committee, together with the external reviewers, for their commitment in the difficult paper selection process. We also thank all the authors who submitted their work for consideration. Finally, we are grateful to the local organizers of ALGO, chaired by Christos Zaroliagis, for the efforts, which made chairing IPEC an enjoyable experience.

Thore Husfeldt and Iyad Kanj

Berkeley and Chicago, October 2015

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