

# 15th International Symposium on Parameterized and Exact Computation

IPEC 2020, December 14–18, 2020, Hong Kong, China (Virtual  
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Edited by

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## ■ Preface

This volume contains the papers presented at IPEC 2020: the 15th International Symposium on Parameterized and Exact Computation. IPEC 2020 was held virtually on 14–18 December 2020 and was organized, together with ISAAC 2020, by The Hong Kong Polytechnic University, China.

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, 53 abstracts were submitted, which led to 51 papers considered by the program committee. Each considered submission received at least 3 reviews. The reviews came from the 14 members of the program committee and from 62 external reviewers, together contributing 160 reviews. The program committee held electronic meetings through the EasyChair platform. In the end, the program committee selected 26 of the submissions for presentation at the symposium and inclusion in these proceedings.

The Best Paper Award and Best Student Paper Award were given jointly to two co-winners:

- Tuukka Korhonen, for his paper *Finding Optimal Triangulations Parameterized by Edge Clique Cover*,
- Łukasz Bożyk, Jan Derbisz, Tomasz Krawczyk, Jana Novotná and Karolina Okrasa, for their paper *Vertex deletion into bipartite permutation graphs*.

IPEC 2020 hosted an award ceremony with a plenary talk for the 2020 EATCS-IPEC Nerode Prize for outstanding papers in the area of multivariate algorithmics. The Nerode prize committee consisted of Hans L. Bodlaender, Anuj Dawar, and Virginia Vassilevska Williams. They awarded the prize to the following series of two papers:

- Dániel Marx, *Parameterized graph separation problems*. Theoretical Computer Science 351(3), 394–406 (2006)
- Jianer Chen, Yang Liu, Songjian Lu, Barry O’Sullivan, Igor Razgon, *A fixed-parameter algorithm for the directed feedback vertex set problem*. J. ACM 55(5) (2008)

IPEC 2020 also invited Yoichi Iwata to present a tutorial. Finally, IPEC 2020 hosted the award ceremony and poster session of the fifth *Parameterized Algorithms and Computational Experiments* challenge, PACE. This yearly challenge was conceived in Fall 2015 to deepen the relationship between parameterized algorithms and practice. These proceedings contain a report by Ł. Kowalik, M. Mucha, W. Nadara, M. Pilipczuk, M. Sorge, and P. Wygocki on the 2020 PACE challenge.

### Previous iterations of I(W)PEC

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
2015	Patras, Greece
2016	Aarhus, Denmark
2017	Vienna, Austria
2018	Helsinki, Finland
2019	Münich, Germany



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. We are grateful to the local organizers of ISAAC 2020 and IPEC 2020, for their work on the local arrangements. Finally, we acknowledge the financial support of The Hongkong Polytechnic University, the University of Warsaw, and the European Research Council (ERC) via European Union's Horizon 2020 research and innovation programme Grant Agreement no. 714704.

Yixin Cao and Marcin Pilipczuk  
Hongkong and Warsaw, October 2020

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