Preface

This volume contains the 31 papers that were presented at WG 2017, the 43rd International Workshop on Graph-Theoretic Concepts in Computer Science. The workshop was held during June 21–23, 2017, at the Kapellerput Conference Hotel in Heeze, The Netherlands.

WG conferences cover a wide range of areas, and they connect theory and applications by demonstrating how graph-theoretic concepts can be applied in various areas of computer science. One of the main goals is to present recent results and to identify and explore promising directions of future research. WG has a long tradition that goes back the 1970s. The first three WGs were organized in 1975 by Uwe Pape at TU Berlin, in 1976 by Hartmut Noltemeier in Göttingen, and in 1977 by Jörg Mühlbacher in Linz.

WG usually takes place in Europe. WG 2017 was the fifth time the conference was held in The Netherlands; earlier, WG was held in Amsterdam (1988), Castle Rolduc (near Heerlen, The Netherlands, and Aachen, Germany, 1989), Arnhem (1993), and Elspeet (2003). In addition, it has been organized many times in Germany, three times in France, twice in Austria and twice in Czech Republic, and once in each of England, Greece, Israel, Italy, Norway, Slovakia, Switzerland, and Turkey.

Three excellent invited lectures at WG 2017 were given by Petra Mutzel (Dortmund), Remco van der Hofstad (Eindhoven), and Fedor Fomin (Bergen).

We received 71 submissions in total, and out of these the Program Committee selected 31 papers for presentation at the symposium and for publication in the proceedings. Each submission was reviewed by at least four Program Committee members. We expect the full versions of the papers contained in this volume to be submitted for publication in refereed journals. The Program Committee also selected the winners of the Best Paper Award and the Best Student Paper Award:

Best Paper Award
Yijia Chen, Martin Grohe, and Bingkai Lin:
"The Hardness of Embedding Grids and Walls"

The Program Committee decided to split the Best Student Paper Award between the following two papers:

Best Student Paper Award
Dušan Knop, Martin Koutecky, Tomáš Masařík, and Tomáš Toufar:
"Simplified Algorithmic Metatheorems Beyond MSO: Treewidth and Neighborhood Diversity"

Best Student Paper Award
Steven Chaplick, Martin Töpfer, Jan Voborník, and Peter Zeman:
"On H-Topological Intersection Graphs"

Many individuals and organizations contributed to the smooth running and the success of WG 2017. In particular our thanks go to:

– All authors who submitted their newest research to WG
– Our reviewers and additional referees whose expertise flowed into the decision process
– The members of the Program Committee, who graciously gave their time and energy
– The members of the local Organizing Committee, who made the conference possible
– The EasyChair conference management system for hosting the evaluation process
– The NWO Gravitation program NETWORKS for financial support
– The Mathematics and Computer Science Department at TU Eindhoven
– The members of the local Organizing Committee
– Springer for supporting the Best Paper Awards
– The invited speakers, the other speakers, and the participants for making WG 2017 an inspiring event

August 2017   Hans L. Bodlaender
                                                    Gerhard J. Woeginger