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Discrete and Computational Geometry and Graphs

18th Japan Conference, JCDCGG 2015
Kyoto, Japan, September 14–16, 2015
Revised Selected Papers

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Preface

This volume of proceedings contains the peer-reviewed papers presented during the 18th Japan Conference on Discrete and Computational Geometry and Graphs (JCDCG² 2015). JCDCG² 2015 was held at Kyoto University, Kyoto, Japan, during September 14–16, 2015.

This volume is dedicated to Prof. Naoki Katoh (Fig. 1) for his retirement from Kyoto University and for his new journey to Kwansei Gakuin University. Professor Katoh obtained his Bachelor, Master, and Doctor of Engineering degrees from Kyoto University, in 1973, 1975, and 1981, respectively. He was first employed by Kobe University of Commerce as a lecturer in 1981, and then became Associate Professor and (Full) Professor before he went back to his alma mater in 1997. At Kyoto University, he entered and worked as a professor at the Department of Architecture and Architectural Engineering, Faculty of Engineering. After 18 years of dedication, he retired from Kyoto University and moved to the Department of Informatics, Faculty of Science and Technology at Kwansei Gakuin University where he is now a professor. Professor Katoh has written 137 refereed academic papers in highly competitive journals, such as *J. ACM*, *SIAM J. Comput.*, *SIAM J. Discrete Math.*, *Discrete & Comput. Geometry*, and *Combinatorica*. Moreover, he has 94 peer-reviewed papers in various international conference proceedings, which includes STOC, FOCS, SODA, and SoCG. His diverse research output includes operations research, combinatorial optimization, discrete algorithms, computational geometry, etc. His contributions to the aforementioned areas are undoubtedly outstanding and relevant. Thus, it is with great pleasure that we celebrate his move by dedicating these proceedings to him.



Fig. 1. Professor Naoki Katoh

The previous JCDCG² conferences were held in Tokyo as JCDCG (Japan Conference on Discrete and Computational Geometry) in 1997, 1998, 1999, 2000, 2002, 2004, 2006, and 2011 and as JCDCG² (Japan Conference on Discrete and Computational

Geometry and Graphs) in 2013 and 2014; in Kyoto as KyotoCGGT (Kyoto International Conference on Computational Geometry and Graph Theory) in 2007; and in Kanazawa as JCCGG (Japan Conference on Computational Geometry and Graphs) in 2009. Other conferences in this series were also held in the Philippines (2001), Indonesia (2003), China (2005, 2010), and Thailand (2012). The proceedings of these conferences were published by Springer as a part of the LNCS series in volumes 1763, 2098, 2866, 3330, 3742, 4381, 4535, 7033, 8296, and 8845. The proceedings of the fifth and 12th conferences (2001 and 2009) were published by Springer as special issues of the journal *Graphs and Combinatorics*, Vol. 18, No. 4, 2002 and Vol. 27, No. 3, 2011.

JCDCG² 2015 received 64 proposals for oral presentations, 60 of which were accepted, and only 25 of these papers are published in these proceedings after careful scrutiny and strict review procedures.

The organizers of JCDCG² 2015 express deep appreciation to the invited speakers, John Iacono, Toshihide Ibaraki, János Pach, David Rappaport, and Takeshi Tokuyama, for their invaluable contributed talks. It is also appropriate to record the organizers' gratitude to the conference secretariat, to all the speakers, and to each participant. This conference was a success because of all of you.

July 2016

Jin Akiyama
Hiro Ito
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