

Editor's Message for Special Issue of Discrete and Computational Geometry, Graphs, and Games

HIRO ITO^{1,a)}

Since Euclid's Elements, geometry has undoubtedly been one of the oldest and most important research areas, while discrete geometry and computational geometry are relatively new areas that have only been considered widely since the last half of the 20th century or so. However, they have experienced rapid and significant progress over these decades, along with the progress of computing power.

On the other hand, research in the field of games and recreational mathematics began at least hundreds of years ago. It has charmed many people, both professional researchers and amateurs, progressed rapidly over the past century, and now plays an indispensable role in mathematics and computer science.

The Guest Editor has been organizing research workshops on the theory of combinatorial games and puzzles every year since 2005 in Japan^{*1}, and feels there is considerable demand for special issues on this type of research.

The first special issue on "Mathematics of Puzzles" appeared in 2012 in this journal, the Journal of Information Processing (JIP), and it marked a great accomplishment by presenting many visionary papers. That success led to the next special issue in 2013, a special issue whose title was changed to "Recreational Discrete Mathematics," to include a wider range of recreational math in 2015, and a special issue whose title was changed again to "Discrete and Computational Geometry, Graphs, and Games" in 2017.

The Guest Editor also has been the PC-chair of the 16th to 18th Japan Conferences on Discrete and Computational Geometry and Graphs (JCDCG² 2013, 2014, and 2015), the 19th, 20th, and 22nd Japan Conference on Discrete and Computational Geometry, Graphs, and Games (JCDCG³ 2016, 2017, and 2019)^{*2}, and the 9th international conference on fun with algorithms (FUN2018)^{*3}. Throughout these experiences, he found that these research areas all benefit from being united with each other. Thus, he decided the theme of this year's special issue without hesitation.

The editorial board is composed of very capable professionals, who greatly helped the guest editor. We called for papers worldwide, e.g. at international conferences and meetings or in personal communications. As a result of this effort, high-level papers have been collected from around the world.

This year's special issue consists of 25 papers (one of them is a short note) selected from 41 submissions through careful review. The ratio of acceptance is around 0.61. Of the 25 accepted pa-

pers, 14 papers (14/25 \approx 56%) include authors outside of Japan (i.e., their affiliations are in foreign countries), and 10 of them (10/25 \approx 40%) are only by authors outside of Japan. Such internationalism is a strong merit of this issue.

Moreover, this issue got three significant invited papers by excellent top researchers, Jin Akiyama, Erik D. Demaine, and János Pach. These papers add incalculable value to the issue.

The success of this issue makes the guest editor believe more strongly in the need for such special issues. We are planning to continue to propose special issues on these themes in the future. *If many of the readers of this issue start or continue to do research in this area, and a variety of exceptional papers is submitted, we would be most delighted.*

In closing my message, as guest editor of this special issue, I would like to thank all of the authors for their contributions. I also appreciate the voluntary work of all reviewers as well as the remarkable efforts of the members of the Editorial Committee listed below.

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¹ School of Informatics and Engineering, The University of Electro-Communications (UEC), Tokyo 182-8585, Japan

^{a)} itohiro@uec.ac.jp

^{*1} <http://www.alg.cei.uec.ac.jp/itohiro/Games/>

^{*2} <http://www.alg.cei.uec.ac.jp/itohiro/JCDCGG/>

^{*3} <https://sites.google.com/view/fun2018/>