Editor's Message for Special Issue on Mathematics of Puzzles

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Research in the field of recreational mathematics began at least hundreds of years ago. It has been charming many people, both professional researchers and amateurs, has seen rapid progress 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 he feels there is not small demand for special issues on this type of research.

The first special issue on "Mathematics of Puzzles" appeared last year in this Journal, the Journal of Information Processing (JIP), and it marked a great accomplishment by presenting many visionary papers. That success has led to this year's special issue, the second in two straight years.

The editorial board is composed of very capable professionals, who greatly helped the guest editor. This year's special issue consists of 6 full papers selected from 16 submissions through careful review. The ratio of acceptance is 0.375, indicating how the issue represents a select few. The topics include Rubik's Cube, Towers of Hanoi, Tantrix, Picture Mazes, and Arithmetical Restorations (Mushikui-Zan). The guest editor is especially proud of presenting the distinguished paper on the Snake Cube, authored by a group led by the renowned young genius Erik Demaine of MIT.

Actually, the numbers of submissions and accepted papers have not been so high. This may indicate that the amount of rigorous outputs from theoretical research on mathematical recreation is not yet substantial. However, the potential of this work is high. The guest editor guesses the low level of activity reflects the fact that we have had very few regularly planned special issues devoted to this area so far.

Special issues on mathematical recreations are being planned for continuous publication in the future, perhaps biennially. *If many of the readers of this issue start or continue to do research in this area, and a variety of exceptional papers are submitted, we would be most delighted.*

Recreation and amusement are very important for us, since we are "Homo ludens." The pursuit of fun for humans certainly creates useful products. So let's enjoy recreational mathematics!

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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