



**Special Issue on Selected Papers from the 11th
International Conference and Workshops on
Algorithms and Computation, WALCOM 2017**

Guest Editors' Foreword

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This issue of Journal of Graph Algorithms and Applications (JGAA) includes full journal versions of four papers selected from the papers presented at the 11th International Conference and Workshops on Algorithms and Computation (WALCOM 2017) held in the beautiful campus of National Chiao Tung University, Hsinchu, Taiwan during March 29-31, 2017. Only a few papers among the highly-ranked ones were invited for the special issue based on their merits and relevance to JGAA. The invited papers have gone through the standard refereeing process of JGAA to ensure its high publication standards.

The paper *Sequentially Swapping Colored Tokens on Graphs* by Yamanaka, Demaine, Horiyama, Kawamura, Nakano, Okamoto, Saitoh, Suzuki, Uehara and Uno considers an interesting puzzle on graphs where some colored tokens are placed on a graph and it is asked to rearrange the tokens by swapping adjacent tokens sequentially on a path such that each vertex of the graph gets its pre-specified token. The authors consider the problem to find the smallest path to rearrange the tokens in the desired configuration. The authors have proved the inapproximability of the problem and given polynomial time algorithms when the input graph is restricted to trees, complete graphs, and cycles.

Kawahara, Saitoh and Yoshinaka in their paper *The Time Complexity of Permutation Routing via Matching, Token Swapping and a Variant* consider the problems of permutation routing via matching and token swapping which are in fact reconfiguration problems on graphs and have investigated the time complexity of some restricted cases of those problems.

A new criterion of interest for graph drawing is introduced in the paper *An Experimental Study on the Ply Number of Straight-line Drawings* by De Luca, Di Giacomo, Didimo, Kobourov and Liotta which is defined as the maximum number of overlapping disks such that each disk is associated with a vertex and has a radius that is half the length of the longest edge incident to that vertex. The paper reports the results of extensive experimental study to find correlation between the ply number and other aesthetic quality metrics of graph drawing.

Kuroki and Matsui consider a network design problem in their paper *Approximation Algorithm for Cycle-Star Hub Network Design Problems and Cycle-Metric Labeling Problems* which has applications in the design of networks in telecommunications and airline transportation systems. The authors have presented a polynomial time approximation algorithm for a cycle-star hub network design problem with a good approximation ratio by solving the linear relaxation problem and employing a dependent rounding procedure.

Many thanks go to the authors for contributing their high-quality papers, to the reviewers for their excellent professional service, and to the editors of the Journal of Graph Algorithms and Applications for making this special issue possible. We thank Chun-Cheng Lin and his team for their tireless efforts in organizing WALCOM 2017 in Taiwan.