Special Issue on Selected Papers from the 16th International Workshop on Algorithms and Computation (WALCOM 2022) Guest Editors' Foreword

Md. Saidur Rahman[1] *Petra Mutzel*[2] *Slamin*[3]

[1]Bangladesh University of Engineering and Technology, Dhaka, Bangladesh
[2]University of Bonn, Bonn, Germany
[3]University of Jember, Jember, Indonesia

E-mail addresses: saidurrahman@cse.buet.ac.bd (Md. Saidur Rahman) petra.mutzel@cs.uni-bonn.de (Petra Mutzel) slamin@unej.ac.id (Slamin)

This special issue of the Journal of Graph Algorithms and Applications (JGAA) includes full journal versions of two papers selected from the papers presented at the 16th International Conference and Workshops on Algorithms and Computation (WALCOM 2022) held at the Universitas Jember, Jember, East Java, Indonesia during March 24-26, 2022. 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 *Morphing Tree Drawings in a Small 3D Grid* by Arseneva, Gangopadhyay and Istomina considers an interesting problem on crossing-free morphing of planar drawings of trees. The authors give an algorithm that morphs between two planar grid drawings of an n-vertex tree T in $O(\sqrt{n}\log n)$ steps such that all intermediate drawings are crossing-free 3D-grid drawings and lie inside a polynomially bounded 3D grid. This is the first algorithm for such a problem that produces all intermediate drawings with polynomially bounded resolution throughout the morphing process.

Nishat, Srinivasan and Whitesides in their paper *1-complex s,t Hamiltonian Paths: Structure and Reconfiguration in Rectangular Grids* consider an interesting problem of reconfiguring an Hamiltonian path into another on grid graphs. A 1-complex path on a grid graph G is a path such that each vertex on the path is connected to a vertex on the outer boundary of the grid by a straight-line segment. Given two 1-complex s,t Hamiltonian paths P_1 and P_2 on a $m \times n$ grid graph G, where s is the top-left vertex and t is the lower-right vertex of G, their algorithm constructs P_2 from P_1 using mn switch operations. The authors also present a complete structure theorem of 1-complex paths in grid graphs.

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 Slamin, Anton Prihandoko, Dafik and their team for their tireless efforts in organizing WALCOM 2022 in Indonesia.