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**Special Issue with Selected Papers from the
18th International Symposium on
Graph Drawing, GD 2010:
Guest Editors' Foreword**

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This special issue is devoted to the 18th International Symposium on Graph Drawing, which was held in Konstanz, Germany, during September 2010. Preliminary versions of the papers have appeared in the conference proceedings published by Springer-Verlag, Lecture Notes in Computer Science, vol. 6502. As the editors of this JGAA special issue, we invited the authors of several among the highest rated papers from GD 2010 to submit a revised and extended version of their work. The submissions of those authors who agreed to contribute to the special issue have all undergone a thorough refereeing and revision process.

The papers reflect the broad variety of graph drawing. They cover theoretical aspects such as *Monotone Drawings of Graphs* and *Geometric Simultaneous Embeddings* as well as drawing aesthetics as in *Lombardi Drawings* and practical issues as in *Drawing Graphs on a Smartphone*.

Angelini, Colasante, Di Battista, Frati, and Patrignani consider straight-line drawings of graphs such that, for every pair of vertices, there exists a path that monotonically increases with respect to some direction. Starting from the fact that strictly convex drawings of a planar graph are monotone the authors give algorithms for constructing monotone planar drawings of trees and biconnected planar graphs.

The question of geometric simultaneous embeddings asks whether two planar graphs on the same vertex set can both have a straight-line planar drawing using the same vertex embedding. In the second paper, Angelini, Geyer, Kaufmann, and Neuwirth give an example of a path and a tree of height four that do not have a geometric simultaneous embedding. As a positive result, the authors show that a path and a tree of height two always admit a geometric simultaneous embedding.

New drawing conventions are introduced in the paper of Duncan, Eppstein, Goodrich, Kobourov, and Nöllenburg. Inspired by the work of the late artist Mark Lombardi, edges are drawn as circular arcs and required to yield perfect angular resolution. Algorithms and complexity results are given for several variant drawing styles and restricted classes of graphs. We believe that the beauty of these examples alone will inspire further work in this area.

This special issue is capstoned by work of Da Lozzo, Di Battista, and Ingrassia that is both solid technically and very practical. They propose a layout and interaction design for graph drawings that accounts for the size constraints of current smartphones. The contribution is complete with software libraries available for download and nicely demonstrates the potential of graph drawing for the masses.

Many thanks go to the authors for contributing their high-quality papers, to the reviewers for their careful work that led to further improvements, and to the editors of the Journal of Graph Algorithms and Applications for making this special issue possible.