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**Special Issue of Selected Papers from the
21st International Symposium on
Graph Drawing (GD 2013)
Guest Editors' Foreword**

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This special issue of the Journal of Graph Algorithms and Applications is devoted to the 21st International Symposium on Graph Drawing, which was held in Bordeaux, France, September 23–25, 2013. As the editors of this JGAA special issue, we invited the authors of some of the best papers from GD 2013 to submit a revised and extended version of their work. Each paper submitted to this issue was subject to a thorough reviewing process. After further revisions, five papers were accepted. We thank all the authors for contributing their high-quality papers, and all the referees for their conscientious, timely, and excellent work.

The five papers in this issue reflect the broad variety of topics in graph drawing, both in theoretical and in application fields.

- Bannister, Cheng, Devanny, and Eppstein connect the problem of determining a universal point set for straight line drawings of planar graphs to a problem involving determining superpatterns in permutations. By constructing permutations that avoid the pattern 213, they present universal point sets of size $n^2/4 - \Theta(n)$ for drawing any n -vertex planar graph.
- Partly motivated by the *Planarity* game, Eppstein describes a linear-time algorithm that draws a simple line or pseudoline arrangement with n intersection points, as a planar graph in a grid of area $O(n^{7/6})$. Hence, such a grid provides a universal point set for drawing the graph associated with any simple (pseudo-) line arrangement with n intersection points.
- A *floorplan* is a partition of a rectangle into interior-disjoint rectangles. Felsner proves a conjecture of Ackerman, Barequet, and Pinter (2006), which says that, given a set of n points in a rectangle, each point can generate an incident line segment creating a floorplan of $n + 1$ interior rectangles. The proof technique uses an *air-pressure* paradigm controlling the area of the interior rectangles.
- Frati, Kaufmann, Pach, Tóth, and Wood investigate upward planar drawings of *mixed* plane graphs. Such a graph comes with a plane embedding, and the direction of some edges is fixed. While variants of this problem are known to be NP-hard, the authors present a cubic-time algorithm for outerplane mixed graphs.
- Purchase revisits her own earlier user study that was designed to investigate what criteria people actually use when sketching graphs to display them most effectively. She critically reflects upon her earlier conclusions and tests them by examining possible biases introduced by, for example, the format in which the graphs were presented to the subjects.

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