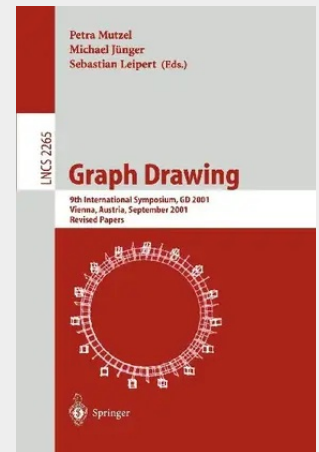


Graph Drawing

9th International Symposium, GD 2001 Vienna, Austria, September 23-26, 2001, Revised Papers

With 133 registered participants from 27 countries, including 19 participants from industry, the International Symposium on Graph Drawing 2001 (GD 2001) that took place in Vienna, September 23–26, 2001, clearly demonstrated that the graph drawing community is still growing. The 31 contributed talks that had been selected out of 66 papers submissions by the program committee reflect the many facets of graph drawing and the high activity in our scientific discipline. In addition, we had the pleasure of enjoying invited presentations by Alexander Schrijver and Eduard Grötsch that mark extreme points of the wide spectrum of graph drawing, the mathematical foundations and the computer graphics, respectively. We have compiled the written versions of these contributions in the same order as they were presented during the conference. We have added a correct version of Joan P. Hutchinson's contribution to GD 2000 that had been misprinted in the GD 2000 proceedings. GD 2001 hosted a software exhibition that gave participants and guests the opportunity for hands-on experience with state-of-the-art graph drawing tools. Out of the 26 submitted software tools, 24 were represented at the conference and received considerable attention by the participants. Each of them is represented here by a two-page summary. In a special session on graph exchange formats, organized by Giuseppe Liotta, the GXL and the GraphML projects were represented by Andreas Winter and Ulrik Brandes, respectively, and then a lively discussion followed. The written versions of the two reports are also included here. The final contribution in this volume is a report on a traditional component of all graph drawing conferences that is a serious and a fun event at the same time: the Graph Drawing Contest 2001 organized by Franz Brandenburg. We would like to thank all contributors for the pleasant cooperation.

Hierarchical Drawing.- A Fixed-Parameter Approach to Two-Layer Planarization.- How to Layer a Directed Acyclic Graph.- Fast and Simple Horizontal Coordinate Assignment.- Automated Visualization of Process Diagrams.- Planarity.- Planarization of Clustered Graphs.- An Algorithm for Finding Large Induced Planar Subgraphs.- A Characterization of DFS Cotree Critical Graphs.- Crossing Theory.- An Improved Lower Bound for Crossing Numbers.- Crossing-Critical Graphs and Path-Width.- One Sided Crossing Minimization Is NP-Hard for Sparse Graphs.- Compaction.- Fast Compaction for Orthogonal Drawings with Vertices of Prescribed Size.- Labeling Heuristics for Orthogonal Drawings.- Planar Graphs.- Untangling a Polygon.- Drawing with Fat Edges.- Symmetries.- Detecting Symmetries by Branch & Cut.- Drawing Graphs Symmetrically in Three Dimensions.- Interactive Drawing.- User Hints for Directed Graph Drawing.- Graph Drawing in Motion II.- Online Hierarchical Graph Drawing.- Representations.- Recognizing String Graphs Is Decidable.- On Intersection Graphs of Segments with Prescribed Slopes.- Aesthetics.- A Short Note on the History of Graph Drawing.- Towards an Aesthetic Invariant for Graph Drawing.- 2D- and 3D-Embeddings.- Orthogonal Drawings with Few Layers.- Bounded Degree Book Embeddings and Three-Dimensional Orthogonal Graph Drawing.- Straight-Line Drawings on Restricted Integer Grids in Two and Three Dimensions.- Low-Distortion Embeddings of Trees.- Data Visualization.- Insight into Data through Visualization.- Floor-Planning.- Floor-Planning via Orderly Spanning Trees.- Disconnected Graph Layout and the Polyomino Packing Approach.- Planar Drawings.- Orthogonal Drawings of Plane Graphs without Bends.- Polar Coordinate Drawing of Planar Graphs with Good Angular Resolution.- Corrected Printing of GD 2000 Paper.- On Polar Visibility Representations of Graphs.- Software Exhibition.- Tulip.- The ILOG JViews Graph Layout Module.- WAVE.- WilmaScope- An Interactive 3D Graph Visualisation System.- Exploration and Visualization of Computer Networks: Polyphemos and Hermes.- CrocoCosmos.- The Graph Drawing Server.- Drawing Database Schemas with DBDraw.- File: Visualization and Automatic Layout of Graphs



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