

GD 2000 Preliminary Program

Colonial Williamsburg,
Virginia, USA
September 20-23, 2000



Regular papers: 25 minutes

Short papers: 15 minutes

Wednesday, September 20, 2000

5:00 - 7:00 Registration and Reception

Thursday, September 21, 2000

8:45 – 9:45 Invited Talk

The Visual Representation of Information Structures

Colin Ware, *University of New Hampshire*

10:05 – 12:00 Empirical Studies & Standards

Chair: Wendy Feng

User preference of graph layout aesthetics: a UML study

Helen C. Purchase, Jo-Anne Allder, David Carrington, *The University of Queensland*

A User Study in Similarity Measures for Graph Drawing

Stina Bridgeman, Roberto Tamassia, *Brown University*

Interactive Partitioning (short paper)

Neal Lesh, Joe Marks, Maurizio Patrignani, *MERL—Mitsubishi Electric Research Labs*

An Experimental Comparison of Orthogonal Compaction Algorithms

Gunnar Klau, Karsten Klein, *Max-Planck-Institut für Informatik*
Petra Mutzel, *Technische Universität Wien*

GraphXML—An XML-based graph description format

I. Herman, M.S. Marshall, *Centre for Mathematics and Computer Sciences (CWI), The Netherlands*

1:30 - 3:10 Theory I

Chair: Michael Kaufmann

On Polar Visibility Representations of Graphs

Joan P. Hutchinson, *Macalester College*

A Linear Time Implementation of SPQR-Trees

Carsten Gutwenger, *Max-Planck-Institut für Informatik*
Petra Mutzel, *Technische Universität Wien*

Labeling Points with Rectangles of Various Shapes

Shin-ichi Nakano, *Gunma University*
Takao Nishizeki, Takeshi Tokuyama, Shuhei Watanabe, *Tohoku University*

How to Draw the Minimum Cuts of a Planar Graph

Ulrik Brandes, Sabine Cornelsen, Dorothea Wagner, *University of Konstanz*

3:40 – 5:35 Applications & Systems

Chair: Ashim Garg

2D-Structure Drawing of Similar Molecules

J.D. Boissonnat, F. Cazals, J. Flötto, *INRIA Sophia-Antipolis*

Fast Layout Methods for Timetable Graphs

Ulrik Brandes, Dorothea Wagner, *University of Konstanz*
Galina Shubina, Roberto Tamassia, *Brown University*

An Algorithmic Framework for Visualizing Statecharts

R. Castello, R. Mili, I.G. Tollis, *The University of Texas at Dallas*

Visualization of the Autonomous Systems Interconnections with Hermes

Andrea Carmignani, Giuseppe Di Battista, Walter Didimo, Francesco Matera, Maurizio Pizzonia, *Università di Roma Tre*

Drawing hypergraphs in the subset standard (short paper)

François Bertault, Peter Eades, *University of Newcastle*

Friday, September 22, 2000

8:45 – 9:45 Invited Talk

Knowledge Discovery from Graphs

David Jensen, *University of Massachusetts*

10:05 – 12:00 Force-Directed Layout

Chair: Stephen North

A Multilevel Algorithm for Force-Directed Graph Drawing

C. Walshaw, *University of Greenwich*

A Fast Multi-Scale Method for Drawing Large Graphs

David Harel, Yehuda Koren, *Weizmann Institute of Science*

FADE: Graph drawing, clustering and visual abstraction

Aaron Quigley, Peter Eades, *University of Newcastle*

A Fast Multi-Dimensional Algorithm for Drawing Large Graphs

Pawel Gajer, Michael T. Goodrich, Stephen G. Kobourov, *The Johns Hopkins University*

GRIP: Graph dRrawing with Intelligent Placement (short paper)

Pawel Gajer, Stephen G. Kobourov, *The Johns Hopkins University*

1:10 – 2:15 k-Level Graph Layout

Chair: Roberto Tamassia

A Fast Layout Algorithm for k-Level Graphs

Christoph Buchheim, Michael Jünger, Sebastian Leipert, *Universität zu Köln*

Graph Layout for Displaying Data Structures

Vance Waddle, *IBM Thomas J. Watson Research Center*

k-layer Straightline Crossing Minimization by Speeding up Sifting (short paper)

Wolfgang Günther, Bernd Becker, *Albert-Ludwigs University*
Robby Schönfeld, Paul Molitor, *Martin-Luther University*

2:35 – 3:50 Orthogonal Drawing I

Chair: Stephen Wismath

Lower Bounds for the Number of Bends in Three-Dimensional Orthogonal Graph Drawings

David R. Wood, *The University of Sydney*

Orthogonal Drawings of Cycles in 3D Space

Giuseppe Di Battista, *Università di Roma Tre*
Giuseppe Liotta, *Università di Perugia*
Anna Lubiw, *University of Waterloo*
Sue Whitesides, *McGill University*

Three-Dimensional Orthogonal Graph Drawing with Optimal Volume

Therese Biedl, *University of Waterloo*
Torsten Thiele, *Frei Universität Berlin*
David R. Wood, *The University of Sydney*

4:10 – 5:00 Orthogonal Drawing II

Chair: Therese Biedl

A Linear-Time Algorithm for Bend-Optimal Orthogonal Drawings of Biconnected Cubic Plane Graphs

Shin-ichi Nakano, Makiko Yoshikawa, *Gunma University*

Refinement of Three-Dimensional Orthogonal Graph Drawings

Benjamin Y.S. Lynn, Antonios Symvonis, David R. Wood, *The University of Sydney*

Evening Banquet

Saturday, September 23, 2000

9:00 – 10:30 Theory II

Chair: Michael Goodrich

⊙-Searchlight Obedient Graph Drawings

Gill Barequet, *The Technion---Israel Institute of Technology*

Unavoidable configurations in complete topological graphs

János Pach *Courant Institute NYU and Hungarian Academy of Sciences*
Géza Tóth, *Courant Institute NYU and MIT*

Minimum Weight Drawings of Maximal Triangulations

William Lenhart, *Williams College*
Giuseppe Liotta, *Università di Perugia*

A Layout Algorithm for Bar-visibility Graphs on the Möbius Band (short paper)

Alice M. Dean, *Skidmore College*

10:50 – 12:30 Symmetry & Incremental Layout

Chair: Dorothea Wagner

An Algorithm for Finding Three Dimensional Symmetry in Trees

Seok-Hee Hong, Peter Eades, *University of Newcastle*

On Maximum Symmetric Subgraphs

Ho-Lin Chen, Hsu-Chun Yen, *National Taiwan University*
Hsueh-I Lu, *Academia Sinica*

Clan-Based Incremental Drawing

Fwu-Shan Shieh, *Minolta QMS, Inc.*
Carolyn L. McCreary, *Compaq Computer Corp.*

The Marey graph animation tool demo

Carsten Friedrich, Peter Eades, *University of Newcastle*