

## Sunday, September 11, 2005

9:30 – 17:00 Workshop on Network Analysis and Visualisation

19:00 – 21:00 Welcome Reception and Registration

## Monday, September 12, 2005

8:30 – 9:00 Opening

9:00 – 10:50 Session 1  
Chair: Patrick Healy

**Invited Talk: Certifying Algorithms**  
Kurt Mehlhorn, *Max-Planck-Institut für Informatik*

**Crossing Number of Toroidal Graphs**  
János Pach and Geza Toth

**Exact Crossing Minimization**  
Christoph Buchheim, Dietmar Ebner, Michael Jünger, Gunnar W. Klau, Petra Mutzel, and Rene Weiskircher

10:50 – 11:20 Morning Coffee

11:20 – 12:50 Session 2  
Chair: Dorothea Wagner

**Hierarchical Layouts of Directed Graphs in Three Dimensions**  
Seok-Hee Hong and Nikola S. Nikolov

**Volume Requirements of 3D Upward Drawings**  
Emilio Di Giacomo, Giuseppe Liotta, Henk Meijer, and Stephen K. Wismath

**Complexity Results for Three-dimensional Orthogonal Graph Drawing**  
Maurizio Patrignani

**Drawing  $K_n$  in Three Dimensions with One Bend per Edge**  
(short paper)  
Olivier Devillers, Hazel Everett, Sylvain Lazard, Maria Pentcheva, and Stephen K. Wismath

12:50 – 14:00 Lunch

14:00 – 15:40 Session 3  
Chair: Janos Pach

**No-Bend Orthogonal Drawings of Series-Parallel Graphs**  
Md. Saidur Rahman, Noritsugu Egi, and Takao Nishizeki

**On Rectilinear Duals for Vertex-Weighted Plane Graphs**  
Mark de Berg, Elena Mumford, and Bettina Speckmann

**An Application of Well-Orderly Trees in Graph Drawing**  
Huaming Zhang and Xin He

**Bar  $k$ -Visibility Graphs: Bounds on the Number of Edges, Chromatic Number, and Thickness**  
Alice M. Dean, William Evans, Ellen Gethner, Joshua D. Laison, Mohammad Ali Safari, and William T. Trotter

15:40 – 16:10 Afternoon Tea

16:10 – 17:50 Session 4  
Sponsored by Tom Sawyer Software  
Chair: Sue Whitesides

**A Hybrid Model for Drawing Dynamic and Evolving Graphs**  
Marco Gaertler and Dorothea Wagner

**Drawing Clustered Graphs in Three Dimensions**  
Joshua Ho and Seok-Hee Hong

**GEOMI: GEOMetry for Maximum Insight**  
Adel Ahmed, Tim Dwyer, Michael Forster, Xiaoyan Fu, Joshua Ho, Seok-Hee Hong, Dirk Koschützki, Colin Murray, Nikola S. Nikolov, Ronnie Taib, Alexandre Tarassov, and Kai Xu

**WhatsOnWeb: Using Graph Drawing to Search the Web**  
Emilio Di Giacomo, Walter Didimo, Luca Grilli, and Giuseppe Liotta

18:00 – 19:00 Software Demo and  
XII Annual Graph Drawing Contest

19:30 Barbeque at The Stables

## Tuesday, September 13, 2005

9:00 – 10:50 Session 5  
Chair: Peter Eades

**Invited Talk: Hierarchy Visualization: From Research to Practice**  
George Robertson, *Microsoft Research*

**C-Planarity of Extrovert Clustered Graphs**  
Michael T. Goodrich, George S. Lueker, and Jonathan Z. Sun

**On Embedding a Cycle in a Plane Graph**  
Pier Francesco Cortese, Giuseppe Di Battista, Maurizio Patrignani, and Maurizio Pizzonia

10:50 – 11:20 Morning Coffee

11:20 – 13:00 Session 6  
Chair: Seok-Hee Hong

**Delta-confluent Drawings**  
David Eppstein, Michael T. Goodrich, and Jeremy Y. Meng

**Small Area Drawings of Outerplanar Graphs**  
Giuseppe Di Battista and Fabrizio Frati

**Morphing Planar Graphs While Preserving Edge Directions**  
Therese Biedl, Anna Lubiw, and Michael Spriggs

**Applications of Parameterized  $st$ -Orientations in Graph Drawing Algorithms**  
Charalampos Papamanthou and Ioannis G. Tollis

13:00 – 14:30 Lunch

14:30 – 16:10 Session 7  
Chair: Petra Mutzel

**Energy-Based Clustering of Graphs with Nonuniform Degrees**  
Andreas Noack

**Drawing Graphs using Modular Decomposition**  
Charis Papadopoulos and Constantinos Voglis

**Dynamic Spectral Layout of Small Worlds**  
Ulrik Brandes, Daniel Fleischer, and Thomas Puppe

**Stress Majorization with Orthogonal Ordering Constraints**  
Tim Dwyer, Yehuda Koren, and Kim Marriott

16:10 – 16:40 Afternoon Tea

16:40 – 18:20 Session 8  
*Chair: David Eppstein*

**On Balloon Drawings of Rooted Trees**  
Chun-Cheng Lin and Hsu-Chun Yen

**Layout Effects on Sociogram Perception**  
Weidong Huang, Seok-Hee Hong, and Peter Eades

**Minimum Depth Graph Embeddings and Quality of the Drawings: an Experimental Analysis**  
Maurizio Pizzonia

**An Experimental Comparison of Fast Algorithms for Drawing General Large Graphs**  
Stefan Hachul and Michael Jünger

18:20 Bus to Conference Dinner

## Wednesday, September 14, 2005

9:00 – 10:40 Session 9  
*Chair: Stina Bridgeman*

**Non-Planar Core Reduction of Graphs**  
Carsten Gutwenger and Markus Chimani

**Graph Treewidth and Geometric Thickness Parameters**  
Vida Dujmović and David R. Wood

**Odd Crossing Number Is Not Crossing Number**  
Michael J. Pelsmajer, Marcus Schaefer, and Daniel Stefankovic

**On Edges Crossing Few Other Edges in Simple Topological Complete Graphs**  
Jan Kynčl and Pavel Valtr

10:40 – 11:10 *Morning Coffee*

11:10 – 12:50 Session 10  
*Chair: David Wood*

**Proper and Planar Drawings of Graphs on Three Layers**  
Matthew Suderman

**Convex Drawings of Plane Graphs of Minimum Outer Apices**  
Kazuyuki Miura, Machiko Azuma, and Takao Nishizeki

**Upward Spirality and Upward Planarity Testing**  
Walter Didimo, Francesco Giordano, and Giuseppe Liotta

**Transversal Structures on Triangulations, with Application to Straight-Line Drawing**  
Éric Fusy

12:50 – 14:20 *Lunch*

14:20 – 16:00 Session 11  
*Chair: Giuseppe Liotta*

**Two Trees Which Are Self-Intersecting when Drawn Simultaneously**  
Michael Kaufmann, Imrich Vrt'o, and Markus Geyer

**A Mixed-Integer Program for Drawing High-Quality Metro Maps**  
Martin Nöllenburg and Alexander Wolff

**Fast Node Overlap Removal**  
Tim Dwyer, Kim Marriott, and Peter Stuckey

**Incremental Connector Routing**  
Michael Wybrow, Kim Marriott, and Peter J. Stuckey

16:00 – 16:30 *Afternoon Tea*

16:30 – 17:50 Session 12  
*Chair: Michael Kaufmann*

**Parallel-Redrawing Mechanisms, Pseudo-Triangulations and Kinetic Planar Graphs**  
Ileana Streinu

**Crossings and Permutations**  
Therese Biedl, Franz J. Brandenburg, and Xiaotie Deng

**How to Embed a Path onto Two Sets of Points** (short paper)  
Emilio Di Giacomo, Giuseppe Liotta, and Francesco Trotta

**On Extending a Partial Straight-Line Drawing** (short paper)  
Maurizio Patrignani

## Thursday, September 15, 2005

9:00 *Departure on one-day trip in the West of Ireland*

13th International Symposium on **Graph Drawing**



September 12-14, 2005  
Limerick, Ireland  
[www.gd2005.org](http://www.gd2005.org)

# Final Program

Regular papers: 25 minutes  
Short papers: 15 minutes