



GRAPH DRAWING 2014 – PROGRAM

22nd International Symposium on Graph Drawing · September 24–26, 2014 · Würzburg, Germany

<http://gd2014.informatik.uni-wuerzburg.de/>

Gebäude Z6, Hubland Süd · Am Hubland · 97074 Würzburg

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Tuesday, September 23, 2014		
18:00–21:00	Welcome Reception at <i>Martinz</i> , Martinstr. 21	
Wednesday, September 24, 2014		
Session I	Planar Subgraphs	(Chair: Giuseppe Liotta)
09:00–09:10	Opening Remarks <i>Michael Falk, Dean, Faculty of Mathematics and Computer Science</i>	
09:10–09:30	Planar Induced Subgraphs of Sparse Graphs <i>Glencora Borradaile · David Eppstein · Pingan Zhu</i>	T1
09:30–09:50	Picking Planar Edges; or, Drawing a Graph with a Planar Subgraph <i>Marcus Schaefer</i>	T1
09:50–10:15	Drawing Partially Embedded and Simultaneously Planar Graphs <i>Timothy Chan · Fabrizio Frati · Carsten Gutwenger · Anna Lubiw · Petra Mutzel · Marcus Schaefer</i>	T1
Session II	Simultaneous Embeddings	(Chair: Franz Brandenburg)
10:25–10:45	Drawing Simultaneously Embedded Graphs with Few Bends <i>Luca Grilli · Seok-Hee Hong · Jan Kratochvíl · Ignaz Rutter</i>	T1
10:45–11:05	Planar and Quasi Planar Simultaneous Geometric Embedding <i>Emilio Di Giacomo · Walter Didimo · Giuseppe Liotta · Henk Meijer · Stephen Wismath</i>	T1
11:05–11:25	Simultaneous Embeddability of Two Partitions <i>Jan Christoph Athenstädt · Tanja Hartmann · Martin Nöllenburg</i>	T1
11:25–11:45	Coffee Break	
Invited Talk I		(Chair: Christian Duncan)
11:45–12:45	Good Drawings and Rotation Systems of Complete Graphs <i>Oswin Aichholzer (University of Technology Graz, Austria)</i>	
12:45–14:00	Lunch (Mensa)	
Session III	Applications	(Chair: Michael Kaufmann)
14:00–14:20	Boundary Labeling for Annotations in Texts <i>Philipp Kindermann · Fabian Lipp · Alexander Wolff</i>	T2
14:20–14:40	A Coloring Algorithm for Disambiguating Graph and Map Drawings <i>Yifan Hu · Lei Shi</i>	T2
14:40–15:00	Untangling Hairballs: From 3 to 14 Degrees of Separation <i>Arlind Nocaj · Mark Ortman · Ulrik Brandes</i>	T2
15:00–15:20	GION: Interactively Untangling Large Graphs on Wall-Sized Displays <i>Michael Marnier · Ross Smith · Bruce Thomas · Karsten Klein · Peter Eades · Seok-Hee Hong</i>	T2
15:20–15:40	Coffee Break	
Session IV	Contact Representations	(Chair: Carsten Gutwenger)
15:40–16:00	Balanced Circle Packings for Planar Graphs <i>Md. Jawaherul Alam · David Eppstein · Michael T. Goodrich · Stephen Kobourov · Sergey Pupyrev</i>	T1
16:00–16:20	Unit Contact Representations of Grid Subgraphs with Regular Polytopes in 2D and 3D <i>Linda Kleist · Benjamin Rahman</i>	T1
16:20–16:40	The Galois Complexity of Graph Drawing: Why Numerical Solutions are Ubiquitous for Force-Directed, Spectral, and Circle Packing Drawings <i>Michael J. Bannister · William E. Devanny · David Eppstein · Michael Goodrich</i>	T1
16:40–17:00	Bitonic st-Orderings of Biconnected Planar Graphs <i>Martin Gronemann</i>	T1
Contest		(Chair: Carsten Gutwenger)
17:15–18:45	Graph Drawing Challenge	

Thursday, September 25, 2014

Session V	k-Planar Graphs	(Chair: Ignaz Rutter)
09:00–09:20	Drawing Outer 1-Planar Graphs with Few Slopes <i>Emilio Di Giacomo · Giuseppe Liotta · Fabrizio Montecchiani</i>	T1
09:20–09:40	Fan-planar Graphs: Combinatorial Properties and Complexity Results <i>Carla Binucci · Emilio Di Giacomo · Walter Didimo · Fabrizio Montecchiani · Maurizio Patrignani · Ioannis Tollis</i>	T1
09:40–10:00	On the Recognition of Fan-Planar and Maximal Outer-Fan-Planar Graphs <i>Michael Bekos · Sabine Cornelsen · Luca Grilli · Seok-Hee Hong · Michael Kaufmann</i>	T1
10:00–10:10	Poster Pitches	
Session VI	Posters & Coffee & Cake	
10:20–11:20	Poster Presentations	
Invited Talk II		(Chair: Antonios Symvonis)
11:40–12:40	Matrix-Based Visualization of Graphs <i>Jean-Daniel Fekete (INRIA, France)</i>	
12:40–14:00	Lunch (Mensa)	
Session VII	Crossing Minimization	(Chair: Dorothea Wagner)
14:00–14:20	Crossing Minimization for 1-page and 2-page Drawings of Graphs with Bounded Treewidth <i>Michael J. Bannister · David Eppstein</i>	T1
14:20–14:40	A Crossing Lemma for the Pair-Crossing Number <i>Eyal Ackerman · Marcus Schaefer</i>	T1
14:40–15:00	Are Crossings Important for Drawing Large Graphs? <i>Stephen Kobourov · Sergey Pupyrev · Bahador Saket</i>	T2
Session VIII	Level Drawings	(Chair: Ioannis Tollis)
15:10–15:30	The Importance of Being Proper (In Clustered-Level Planarity and T-Level Planarity) <i>Patrizio Angelini · Giordano Da Lozzo · Giuseppe Di Battista · Fabrizio Frati · Vincenzo Roselli</i>	T1
15:30–15:50	Column Planarity and Partial Simultaneous Geometric Embedding <i>William Evans · Vincent Kusters · Maria Saumell · Bettina Speckmann</i>	T1
15:50–16:10	Flat Foldings of Plane Graphs with Prescribed Angles and Edge Lengths <i>Zachary Abel · Erik D. Demaine · Martin Demaine · David Eppstein · Anna Lubiw · Ryuhei Uehara</i>	T1
16:10–16:30	Coffee Break	
Session IX	Theory	(Chair: Maarten Löffler)
16:30–16:50	Disjoint Edges in Topological Graphs and the Tangled-thackle Conjecture <i>Andres Ruiz-Vargas · Andrew Suk · Csaba Toth</i>	T1
16:50–17:10	Morphing Schnyder Drawings of Planar Triangulations <i>Fidel Barrera-Cruz · Penny Haxell · Anna Lubiw</i>	T1
17:10–17:30	Trade-offs in Planar Polyline Drawings <i>Stephane Durocher · Debajyoti Mondal</i>	T1
Business Meeting & Conference Dinner		
17:40–18:30	Business Meeting	(Chair: Giuseppe Liotta)
19:00–19:20	Mini-Tour of Hofgarten	
19:25	Meeting point: Franconia fountain in front of the Residence	
19:30–22:30	Conference Banquet in the Staatlicher Hofkeller (Cellar of the Residence)	

Friday, September 26, 2014

Session X	Fixed Edge Directions	(Chair: Patrizio Angelini)
09:00–09:20	Stress-Minimizing Orthogonal Layout of Data Flow Diagrams with Ports <i>Ulf Rüegg · Steve Kieffer · Tim Dwyer · Kim Marriott · Michael Wybrow</i>	T2
09:20–09:40	Planar Octilinear Drawings with One Bend Per Edge <i>Michael Bekos · Martin Gronemann · Michael Kaufmann · Robert Krug</i>	T1
09:40–10:00	On the Complexity of HV-Rectilinear Planarity Testing <i>Walter Didimo · Giuseppe Liotta · Maurizio Patrignani</i>	T1
10:00–10:20	Embedding Four-directional Paths on Convex Point Sets <i>Oswin Aichholzer · Thomas Hackl · Sarah Lutteropp · Tamara Mchedlidze · Birgit Vogtenhuber</i>	T1
10:20–10:40	Coffee Break	
Session XI	Drawing under Constraints	(Chair: Michael Bekos)
10:40–11:00	Drawing Graphs within Restricted Area <i>Maximilian Aulbach · Martin Fink · Julian Schuhmann · Alexander Wolff</i>	T1
11:00–11:20	Height-preserving Transformations of Planar Graph Drawings <i>Therese Biedl</i>	T1
11:20–11:40	Drawing Planar Graphs with Reduced Height <i>Stephane Durocher · Debajyoti Mondal</i>	T1
11:40–12:00	Anchored Drawings of Planar Graphs <i>Patrizio Angelini · Giordano Da Lozzo · Marco Di Bartolomeo · Giuseppe Di Battista · Seok-Hee Hong · Maurizio Patrignani · Vincenzo Roselli</i>	T1
12:00–13:30	Lunch (Mensa)	
Session XII	Clustered Planarity	(Chair: David Epstein)
13:30–13:50	Advances on Testing C-Planarity of Embedded Flat Clustered Graphs <i>Markus Chimani · Giuseppe Di Battista · Fabrizio Frati · Karsten Klein</i>	T1
13:50–14:10	Clustered Planarity Testing Revisited <i>Radoslav Fulek · Jan Kyncl · Igor Malinović · Dömötör Pálvölgyi</i>	T1
14:10–14:30	A New Perspective on Clustered Planarity as a Combinatorial Embedding Problem <i>Thomas Bläsius · Ignaz Rutter</i>	T1
14:30–14:50	MapSets: Visualizing Embedded and Clustered Graphs <i>Alon Efrat · Yifan Hu · Stephen Kobourov · Sergey Pupyrev</i>	T2
14:50–15:10	Coffee Break	
Session XIII	Greedy Graphs	(Chair: Peter Eades)
15:10–15:30	Increasing-Chord Graphs On Point Sets <i>Hooman Reisi Dehkordi · Fabrizio Frati · Joachim Gudmundsson</i>	T1
15:30–15:50	On Self-Approaching and Increasing-Chord Drawings of 3-Connected Planar Graphs <i>Martin Nöllenburg · Roman Prutkin · Ignaz Rutter</i>	T1
15:50–16:10	On Monotone Drawings of Trees <i>Philipp Kindermann · André Schulz · Joachim Spoerhase · Alexander Wolff</i>	T1
Closing & Tour		
16:10–16:30	Best Presentation and Best Poster Awards	(Chair: Alexander Wolff)
17:00–18:00	Guided Tour of the Würzburg Residence (palace)	