



GRAPH DRAWING 2016
24th International Symposium on
Graph Drawing & Network Visualization
September 19–21, 2016. Athens, Greece
<http://algo.math.ntua.gr/~gd2016/>

PROGRAM

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	Sunday September 18, 2016	
19:00-21:00	Welcome Reception	
	Monday September 19, 2016	
9:00-9:05	Opening	
9:05-10:40	Session 1. Large Graphs and Clutter Avoidance (chair: Cody Dunne)	
9:05-9:25	<i>A Distributed Multilevel Force-directed Algorithm</i> Alessio Arleo, Walter Didimo, Giuseppe Liotta and Fabrizio Montecchiani	A
9:25-9:45	<i>A Sparse Stress Model (best paper Track 2)</i> Mark Ortmann, Mirza Klimenta and Ulrik Brandes	A
9:45-10:05	<i>Node Overlap Removal by Growing a Tree</i> Lev Nachmanson, Alexander Holroyd, Arlind Nocaj, Sergey Bereg and Leishi Zhang	A
10:05-10:20	<i>Placing Arrows in Directed Graph Drawings</i> Carla Binucci, Markus Chimani, Walter Didimo, Giuseppe Liotta and Fabrizio Montecchiani	As
10:20-10:40	<i>Peacock Bundles: Bundle Coloring for Graphs with Globality-Locality Trade-off</i> Jaakko Peltonen and Ziyuan Lin	A
10:40-11:10	Coffee Break	
11:10-12:30	Session 2: Clustered Graphs (chair: André Schulz)	
11:10-11:30	<i>Twins in Subdivision Drawings of Hypergraphs</i> René Van Bevern, Iyad Kanj, Christian Komusiewicz, Rolf Niedermeier and Manuel Sorge	T
11:30-11:50	<i>Multi-Colored Spanning Graphs</i> Hugo Akitaya, Maarten Löffler and Csaba Toth	T
11:50-12:10	<i>C-planarity of Embedded Cyclic c-Graphs</i> Radoslav Fulek	T
12:10-12:30	<i>Computing NodeTrix Representations of Clustered Graphs</i> Giordano Da Lozzo, Giuseppe Di Battista, Fabrizio Frati and Maurizio Patrignani	T
12:30-14:30	Lunch Break	
14:30-15:30	Session 3: Invited Talk (chair: Martin Nöllenburg)	
14:30-15:30	<i>Distributed Computing: Graph Drawing Unplugged</i> Roger Wattenhofer	
15:30-16:30	Poster Session	
15:30-15:45	Poster Pitches	
15:45-16:30	Poster Exhibition & Coffee Break	
16:30-18:00	Session 4: Planar Graphs (chair: Walter Didimo)	
16:30-16:45	<i>I-bend Upward Planar Drawings of SP-digraphs</i> Emilio Di Giacomo, Giuseppe Liotta and Fabrizio Montecchiani	Ts
16:45-17:05	<i>Non-aligned drawings of planar graphs</i> Therese Biedl and Claire Pennarun	T
17:05-17:20	<i>Snapping Graph Drawings to the Grid Optimally</i> Andre Löffler, Thomas C. Van Dijk and Alexander Wolff	Ts
17:20-17:40	<i>Drawing Planar Graphs with Many Collinear Vertices</i> Giordano Da Lozzo, Vida Dujmovic, Fabrizio Frati, Tamara Mchedlidze and Vincenzo Roselli	T
17:40-18:00	<i>Drawing Graphs on Few Lines and Few Planes</i> Steven Chaplick, Krzysztof Fleszar, Fabian Lipp, Alexander Ravsky, Oleg Verbitsky and Alexander Wolff	T
18:15-19:45	Graph Drawing Live Challenge	

T: Track 1 (theory) paper

Ts: short theory paper

A: Track 2 (applied) paper

As: short applied paper

Tuesday September 20, 2016		
Session 5: Layered and Tree Drawings (chair: Alexander Wolff)		
9:00-9:20	<i>Algorithms for Visualizing Phylogenetic Networks</i> Ioannis Tollis and Konstantinos Kakoulis	A
9:20-9:40	<i>A Generalization of the Directed Graph Layering Problem</i> Ulf Rügge, Thorsten Ehlers, Miro Spönemann and Reinhard von Hanxleden	A
9:40-10:00	<i>Compact Layered Drawings of General Directed Graphs</i> Adalat Jabrayilov, Sven Mallach, Petra Mutzel, Ulf Rügge and Reinhard von Hanxleden	A
10:00-10:20	<i>Bitonic st-orderings for Upward Planar Graphs</i> Martin Gronemann	T
10:20-10:40	<i>Low Ply Drawings of Trees</i> Patrizio Angelini, Michael Bekos, Till Bruckdorfer, Jaroslav Hančl, Michael Kaufmann, Stephen Kobourov, Jan Kratochvíl, Antonios Symvonis and Pavel Valtr	T
10:40-11:10 Coffee Break		
Session 6: Visibility Representations (chair: Maurizio Patrignani)		
11:10-11:30	<i>Visibility Representations of Boxes in 2.5 Dimensions</i> Alessio Arleo, Carla Binucci, Emilio Di Giacomo, William Evans, Luca Grilli, Giuseppe Liotta, Henk Meijer, Fabrizio Montecchiani, Sue Whitesides and Stephen Wismath	T
11:30-11:50	<i>The Partial Visibility Representation Extension Problem</i> Steven Chaplick, Grzegorz Guśpiel, Grzegorz Gutowski, Tomasz Krawczyk and Giuseppe Liotta	T
11:50-12:10	<i>Ortho-polygon Visibility Representations of Embedded Graphs</i> Emilio Di Giacomo, Walter Didimo, William Evans, Giuseppe Liotta, Henk Meijer, Fabrizio Montecchiani and Stephen Wismath	T
12:10-12:30	<i>Obstructing Visibilities with One Obstacle</i> Steven Chaplick, Fabian Lipp, Ji-Won Park and Alexander Wolff	T
12:30-14:30 Lunch Break		
Session 7: Invited Talk (chair: Yifan Hu)		
14:30-15:30	<i>The role of Visual Analytics in Exploring Graph Data</i> Daniel Keim	
15:30-16:00 Coffee Break		
Session 8: Beyond Planarity (chair: Stephen Kobourov)		
16:00-16:20	<i>The crossing number of the cone of a graph</i> Carlos A. Alfaro, Alan Arroyo, Marek Derňár and Bojan Mohar	T
16:20-16:40	<i>Re-embedding a 1-Plane Graph into a Straight-line Drawing in Linear Time</i> Seok-Hee Hong and Hiroshi Nagamochi	T
16:40-16:55	<i>1-Bend RAC Drawings of 1-Planar Graphs</i> Walter Didimo, Giuseppe Liotta, Saeed Mehrabi and Fabrizio Montecchiani	Ts
16:55-17:15	<i>On the Density of non-Simple 3-Planar Graphs</i> Michael Bekos, Michael Kaufmann and Chrysanthi Raftopoulou	T
17:15-17:30	<i>A Note on the Practicality of Maximal Planar Subgraph Algorithms</i> Markus Chimani, Karsten Klein and Tilo Wiedera	As
17:45-18:45 Business Meeting		
20:00 Conference Dinner		

Wednesday September 21, 2016		
Session 9: Crossing Minimization and Crossing Numbers (chair: Stefan Felsner)		
9:00-10:40	Session 9: Crossing Minimization and Crossing Numbers (chair: Stefan Felsner)	
9:00-9:20	<i>Crossing Minimization in Storyline Visualization</i> Martin Gronemann, Michael Jünger, Frauke Liers and Francesco Mambelli	A
9:20-9:40	<i>Block Crossings in Storyline Visualizations (best paper Track 1)</i> Thomas C. Van Dijk, Martin Fink, Norbert Fischer, Fabian Lipp, Peter Markfelder, Alex Ravsky, Subhash Suri and Alexander Wolff	T
9:40-10:00	<i>The Bundled Crossing Number</i> Md. Jawaherul Alam, Martin Fink and Sergey Pupyrev	T
10:00-10:20	<i>Approximating the rectilinear crossing number</i> Jacob Fox, Janos Pach and Andrew Suk	T
10:20-10:40	<i>On the size of planarly connected crossing graphs</i> Eyal Ackerman, Balázs Keszegh and Mate Vizer	T
10:40-11:10 Coffee Break		
Session 10: Topological Graph Theory (chair: Tamara Mchedlidze)		
11:10-12:30	Session 10: Topological Graph Theory (chair: Tamara Mchedlidze)	
11:10-11:30	<i>Topological Drawings of Complete Bipartite Graphs</i> Jean Cardinal and Stefan Felsner	T
11:30-11:50	<i>A Direct Proof of the Strong Hanani-Tutte Theorem on the Projective Plane</i> Éric Colin de Verdière, Vojtěch Kaluža, Pavel Paták, Zuzana Patáková and Martin Tancer	T
11:50-12:10	<i>Hanani-Tutte for Radial Planarity II</i> Radoslav Fulek, Michael Pelsmajer and Marcus Schaefer	T
12:10-12:30	<i>Beyond Level Planarity</i> Patrizio Angelini, Giordano Da Lozzo, Giuseppe Di Battista, Fabrizio Frati, Ignaz Rutter and Maurizio Patrignani	T
12:30-14:30 Lunch Break		
Session 11: Special Graph Embeddings (chair: Radoslav Fulek)		
14:30-16:00	Session 11: Special Graph Embeddings (chair: Radoslav Fulek)	
14:30-14:50	<i>Simultaneous Orthogonal Planarity</i> Patrizio Angelini, Steven Chaplick, Sabine Cornelsen, Giordano Da Lozzo, Giuseppe Di Battista, Peter Eades, Philipp Kindermann, Jan Kratochvíl, Fabian Lipp and Ignaz Rutter	T
14:50-15:05	<i>Stack and Queue Layouts via Layered Separators</i> Vida Dujmovic and Fabrizio Frati	Ts
15:05-15:25	<i>Gabriel Triangulations and Angle-Monotone Graphs: Local Routing and Recognition</i> Nicolas Bonichon, Prosenjit Bose, Paz Carmi, Irina Kostitsyna, Anna Lubiw and Sander Verdonschot	T
15:25-15:45	<i>Track Layout is Hard</i> Michael J. Bannister, William E. Devanny, Vida Dujmovic, David Eppstein and David R. Wood	T
15:45-16:00	<i>Monotone Simultaneous Embeddings of Paths in d-dimensional Space</i> David Bremner, Olivier Devillers, Marc Glisse, Sylvain Lazard, Giuseppe Liotta, Tamara Mchedlidze, Sue Whitesides and Steve Wismath	Ts
16:00-16:30 Coffee Break		
Session 12: Dynamic Graphs (chair: Fabrizio Frati)		
16:30-17:10	Session 12: Dynamic Graphs (chair: Fabrizio Frati)	
16:30-16:50	<i>Evaluation of two interaction techniques for dynamic graph visualization</i> Paolo Federico and Silvia Miksch	A
16:50-17:10	<i>Offline Drawing of Dynamic Trees: Algorithmics and Document Integration</i> Malte Skambath and Till Tantau	A
17:10-17:30 Closing and Awards		

Posters
<i>A simple quasi-planar graph</i> Franz J Brandenburg
<i>Minimum-Displacement Overlap Removal with Orthogonal Ordering Constraints</i> Mereke Van Garderen, Barbara Pampel and Ulrik Brandes
<i>Capturing Lombardi Flow in Orthogonal Drawings by Minimizing the Number of Segments</i> Md. Jawaherul Alam, Michael Dillencourt and Michael Goodrich
<i>Sibling-First Recursive Graph Drawing for Java Bytecode</i> Md. Jawaherul Alam, Michael Goodrich and Timothy Johnson
<i>Tree-based Genealogical Graph Layout</i> Radek Marik
<i>An experimental Study on the Ply Number of Straight-line Drawings</i> Felice De Luca, Emilio Di Giacomo, Walter Didimo, Stephen Kobourov and Giuseppe Liotta
<i>Edge Bundling for Dataflow Diagrams</i> Ulf Rüegg, Christoph Daniel Schulze, Carsten Sprung, Nis Wechselberg and Reinhard Von Hanxleden
<i>Homothetic triangle contact representations</i> Hendrik Schrezenmaier
<i>Flexible Level-of-Detail Rendering for Large Graphs</i> Jan Hildenbrand, Arlind Nocaj and Ulrik Brandes
<i>A Hexagon-Shaped Stable Kissing Unit Disk Tree</i> Man-Kwun Chiu, Maarten Löffler, Marcel Roeloffzen and Ryuhei Uehara
<i>Heuristic Picker for Book Drawings</i> Jonathan Klawitter and Tamara Mchedlidze
<i>I-Fan-Bundle-Planar Drawings</i> Patrizio Angelini, Michael Bekos, Michael Kaufmann, Philipp Kindermann and Thomas Schneck
<i>Robust Genealogy Drawings</i> Fabian Klute