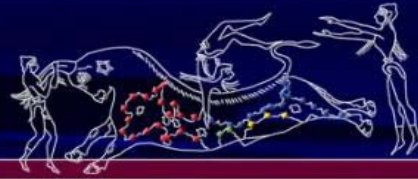


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## *16th International Symposium on Graph Drawing*

September 21 – 24, 2008, Heraklion, Crete, Greece

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## **Program**

*Sunday, September 21, 2008*

20:00 - 21:30 **Welcome Reception and Registration**

## Monday, September 22, 2008

9:00 - 9:10 **Introductory Speech**

9:10 - 9:35 **Succinct Greedy Graph Drawing in the Hyperbolic Plane**

David Eppstein and Michael Goodrich

9:35 - 10:00 **An Algorithm to Construct Greedy Drawings of Triangulations**

Patrizio Angelini, Fabrizio Frati, and Luca Grilli

10:00 - 10:25 **Crossing and Weighted Crossing Number of Near-planar Graphs**

Sergio Cabello and Bojan Mohar

10:25 - 10:50 **Cubic Graphs Have Bounded Slope Parameter**

Balázs Keszegh, János Pach, Dömötör Pálvölgyi, and Géza Tóth

10:50 - 11:20 **Coffee Break**

11:20 - 11:40 **Unimaximal Sequences of Pairs in Rectangle Visibility Drawing (short)**

Jan Stola

11:40 - 12:05 **Visibility Representations of Four-Connected Plane Graphs with Near Optimal Heights**

Chie-Yu Chen, Ya-Fei Hung, and Hsueh-I Lu

12:05 - 12:30 **The Topology of Bendless Three-Dimensional Orthogonal Graph Drawing**

David Eppstein

12:30 - 12:55 **Rapid Multipole Graph Drawing on the GPU**

Apeksha Godiyal, Jared Hoberock, Michael Garland, and John Hart

12:55 - 14:30 **Lunch**

*Sponsored by: Tom Sawyer Software*

14:30 - 15:30 **Networks in Biology - from Identification, Analysis to Interpretation (invited talk)**

Jesper Tegnér

15:30 - 15:55 **Clustered Planarity: Clusters with Few Outgoing Edges**

Ondřej Suchý, Vít Jelínek, Marek Tesař, and Tomáš Vyskočil

15:55 - 16:25 **Coffee Break**

16:25 - 16:45 **Computing Maximum C-Planar Subgraphs (short)**

Markus Chimani, Carsten Gutwenger, Mathias Jansen, Karsten Klein, and Petra Mutzel

16:45 - 17:10 **Clustered Planarity: Embedded Clustered Graphs with Two-Component Clusters**

Vít Jelínek, Eva Jelinkova, Jan Kratochvil, and Bernard Lidicky

17:10 - 17:35 **Visual Analysis of One-To-Many Matched Graphs**

Emilio Di Giacomo, Walter Didimo, Giuseppe Liotta, and Pietro Palladino

Session 1

Chair  
Ulrik Brandes

Session 2

Chair  
Walter Didimo

Session 3

Chair  
I. G. Tollis

Session 4

Chair  
Peter Eades

## Tuesday, September 23, 2008

<b>Session 5</b> Chair David Eppstein	9:00 - 9:25	<b>Topological Morphing of Planar Graphs</b> Patrizio Angelini, Pier Francesco Cortese, Giuseppe Di Battista, and Maurizio Patrignani
	9:25 - 9:50	<b>An SPQR-Tree Approach to Decide Special Cases of Simultaneous Embedding with Fixed Edges</b> J. Joseph Fowler, Carsten Gutwenger, Michael Juenger, Petra Mutzel, and Michael Schulz
	9:50 - 10:15	<b>Graph Simultaneous Embedding Tool</b> Alejandro Estrella-Balderrama, J. Joseph Fowler, and Stephen Kobourov
	10:15 - 10:40	<b>Hamiltonian Alternating Paths on Bicolored Double-chains</b> Josef Cibulka, Jan Kyncl, Viola Meszaros, Rudolf Stolar, and Pavel Valtr

### 10:40 - 11:10 Coffee Break

<b>Session 6</b> Chair Stephen Wismath	11:10 - 11:35	<b>The Binary Stress Model for Graph Drawing</b> Yehuda Koren and Ali Civril
	11:35 - 12:00	<b>Efficient Node Overlap Removal Using a Proximity Stress Model</b> Emden Gansner and Yifan Hu
	12:00 - 12:25	<b>An Experimental Study on Distance-Based Graph Drawing</b> Ulrik Brandes and Christian Pich
	12:25 - 12:50	<b>Topology Preserving Constrained Graph Layout</b> Tim Dwyer, Kim Marriott, and Michael Wybrow

### 12:50 - 14:30 Lunch

<b>Session 7</b> Chair M. Patrignani	<i>Sponsored by: OTE</i>	
	14:30 - 15:30	<i>Dedicated to the memory of Paris C. Kanellakis</i> <b>Graph Drawing for Security Visualization (invited talk)</b> Roberto Tamassia Joint work with Bernardo Palazzi and Charalampos Papamanthou
	15:30 - 15:55	<b>Embeddability Problems for Upward Planar Digraphs</b> Francesco Giordano, Giuseppe Liotta, and Sue Whitesides

### 15:55 - 16:25 Coffee Break

<b>Session 8</b> Chair Michael Kaufmann	16:25 - 16:50	<b>A Fully Dynamic Algorithm to Test The Upward Planarity of Single Source Embedded Digraphs</b> Aimal Rextin and Patrick Healy
	16:50 - 17:10	<b>On the Hardness of Orthogonal-Order Preserving Graph Drawing</b> Barbara Pampel and Ulrik Brandes
	17:10 - 17:35	<b>Generalizing the Shift Method for Rectangular Shaped Vertices with Visibility Constraints (short)</b> Martin Mader and Seok-Hee Hong

### 19:30 Conference Banquet – Villas Restaurant

## Wednesday, September 24, 2008

<b>Session 9</b>	Chair Jan Kratochvíl	9:00 - 9:25	<b>Placing Text Boxes on Graphs: A Fast Approximation Algorithm for Maximizing Overlap of a Square and a Simple Polygon</b> Sjoerd van Hagen and Marc van Kreveld
		9:25 - 9:45	<b>Removing Node Overlaps Using Multi-sphere Scheme (short)</b> Takashi Imamichi, Yohei Arahori, Jaeseong Gim, Seok-Hee Hong, and Hiroshi Nagamochi
		9:45 - 10:10	<b>Minimal Obstructions for 1-immersions and Hardness of 1-planarity Testing</b> Vladimir Korzhik and Bojan Mohar
		10:10 - 10:30	<b>Connected Rectilinear Graphs on Point Sets (short)</b> Maarten Löffler and Elena Mumford
		10:30 - 10:50	<b>3-Regular non 3-Edge-Colorable Graphs with Polyhedral Embeddings in Orientable Surfaces (short)</b> Martin Kochol
<b>10:50 - 11:20 Coffee Break</b>			
<b>Session 10</b>	Chair Seok-Hee Hong	11:20 - 11:45	<b>Drawing (Complete) Binary Tanglegrams: Hardness, Approximation, Fixed-Parameter Tractability</b> Kevin Buchin, Maike Buchin, Jaroslav Byrka, Martin Nöllenburg, Yoshio Okamoto, Rodrigo Silveira, and Alexander Wolff
		11:45 - 12:10	<b>Two Polynomial Time Algorithms for the Metro-Line Crossing Minimization Problem</b> Evmorfia Argyriou, Michael Bekos, Michael Kaufmann, and Antonios Symvonis
		12:10 - 12:35	<b>Cyclic Leveling of Directed Graphs</b> Christian Bachmaier, Franz Josef Brandenburg, Wolfgang Brunner, and Gergö Lovász
		12:35 - 13:00	<b>Constrained Point-Set Embeddability of Planar Graphs</b> Emilio Di Giacomo, Walter Didimo, Giuseppe Liotta, Henk Meijer, and Stephen Wismath
<b>13:00 - 14:30 Lunch</b>			
<b>Session 11</b>	Chair Antonios Symvonis	14:30 - 14:55	<b>Tree Drawings on the Hexagonal Grid</b> Christian Bachmaier, Franz Josef Brandenburg, Wolfgang Brunner, Andreas Hofmeier, Marco Matzeder, and Thomas Unfried
		14:55 - 15:15	<b>Isometric Diamond Subgraphs (short)</b> David Eppstein
		15:15 - 15:35	<b>Non-Convex Representations of Graphs (short)</b> Giuseppe Di Battista, Fabrizio Frati, and Maurizio Patrignani
		15:35 - 16:00	<b>Subdivision Drawings of Hypergraphs</b> Michael Kaufmann, Marc van Kreveld, and Bettina Speckmann
<b>16:00 - 16:30 Coffee Break</b>			
<b>Session 12</b>	Chair Emden Gansner	16:30 - 16:55	<b>Minimum Segment Drawings of Series-Parallel Graphs with the Maximum Degree Three</b> Md. Abul Hassan Samee, Jawaherul Alam, Muhammad Abdullah Adnan, and Md. Saidur Rahman
		16:55 - 17:20	<b>Dunnart: A Constraint-Based Network Diagram Authoring Tool</b> Tim Dwyer, Kim Marriott, and Michael Wybrow
<b>17:20 - 17:30 Closing Remarks</b>			