OPTIMAL DISCRETE
STRUCTURES AND ALGORITHMS

Universität Rostock, September 04 – 06, 2006

EXTENDED ORGANIZING COMMITTEE

A. Brandstädt   K. Engel   H.-D. Gronau   V.B. Le
M. Grützmüller  T. Kalinowski  T. Klembt  R. Labahn
E. de Ridder    N. de Ridder  A. Straßburg  R. Fengler
K. Erdmann   S. Schweder

ADDRESS

Universität Rostock
Institut für Mathematik
18051 Rostock Germany

last change on August 29, 2006
Dear participants,

welcome to

*Optimal Discrete Structures and Algorithms 2006*

in Rostock. After ODSA 1997, ODSA 2000 and the German Congress of Mathematicians 2003 (with special emphasize of our ODSA profile), this is the next conference of our ODSA series. We wish and hope that the conference atmosphere stimulates fruitful discussions of specialists in different areas of research which should be the starting point of deeper interactions between these areas from Discrete Mathematics, Mathematical Optimization, and Theoretical Computer Science.

For us it is very helpful that ODSA is sponsored by the Deutsche Forschungsgemeinschaft, the Ministry of Science, Education, and Culture of Mecklenburg–Vorpommern and the University of Rostock, as well as the Institute of Combinatorics and its Applications. We assume that we may express our thanks to these institutions also on behalf of all participants. Last but not least, we would like to thank all colleagues and students at the Institutes of Mathematics and Computer Science of the University of Rostock who were involved in the organization of this conference.

We wish you nice talks, interesting new results, close cooperation for the future, a successful refereeing process for the conference paper and best Baltic–weather during your stay in Rostock.

Andreas Brandstädt
Konrad Engel
Hans–Dietrich Gronau
Van Bang Le
Plenary Talks

Colbourn, Charles J. Detecting and Locating Interaction Faults
Golumbic, Martin Charles Twenty Years of EPT Graphs: From Haifa to Rostock
Hamacher, Horst W. Consecutive Ones Decomposition of Integer Matrices and Applications
Katona, Gyula O.H. Forbidden inclusion patterns in families of subsets
Sarrafzadeh, Majid General Delay Budgeting on Directed Acyclic Graphs with Applications in CAD

Section Talks

Andres, Stephan Dominique The incidence game chromatic number
Aslanyan, Levon Numerical characterisation of n-cube subset partitioning
Ben-Ameur, Walid New bounds for the maximum cut problem
Bey, Christian Minimum volume of lattice polytopes with given number of interior points
Borisovsky, Pavel A. A comparative study of some evolutionary algorithms
Bouchemakh, Isma Independence set of maximum weight in the order-interval hypergraph of the interval order
Bouroubi, Sadek On the poset of partitions of an integer
Bui-Xuan, Binh-Minh On Modular Decomposition Concepts: the case for Homogeneous Relations
Cieslik, Dietmar Connecting Networks of Minimal Cost
Engel, Konrad Optimal matrix-segmentation by rectangles
Eschen, Elaine Finding Triangles in Restricted Classes of Graphs
Foldes, Stephan On maximal instantaneous codes
Gimadi, Edward NP-hardness and approximation algorithms for solving Euclidean problem of finding a maximum total weight subset of vectors
Gimadi, Edward Asymptotically optimal approach for solving some hard discrete optimization problems
Glazkov, Yury Approximation algorithms for 2-Peripathetic Salesman Problem with edge weights 1 and 2
Göring, Frank The rotational Dimension of a graph
Gropp, Harald Nonisomorphic configurations \( n_k \)
Grüttmüller, Martin Enumeration of Super-simple Cyclic Block Designs of Small Order
Imreh, Csanád On-line scheduling with general machine cost functions
Iwasa, Masaru Approximation Algorithms for the Single Allocation Problem in Hub-and-Spoke Networks
Section Talks (continued)

Kalinowski, Thomas  
Optimization of Multi-Threshold Circuits

Keller, André A.  
Matching Theory and Economic Model Building

Kolpakov, Alexander A.  
Design of “Intelligent” Structures as a Discrete Optimal Problem

Kolpakov, Alexander G.  
Optimal Algorithm for Solution of Discrete Convex Combinations Problem

Kuroki, Yusuke  
Randomized Approximation Algorithm for a Geometrical Multidimensional Assignment Problem

Kurz, Sascha  
Integral point sets over $\mathbb{Z}_n^m$

Laue, Reinhard  
t-Wise Balanced Designs

Mancini, Federico  
A completely dynamic algorithm for split graphs

Mitrana, Victor  
On Some Algorithmic Problems Regarding the Hairpin Completion

Nguyen, Ngoc Tuy  
Graph classes related to chordal graphs and chordal bipartite graphs

Oksanen, Kenneth  
Searching for Selection Algorithms

Östergard, Patric R. J.  
There are exactly five biplanes with $k = 11$

Panda, Bhawani Sankar  
Tree 3-Spanner in 2-sep Chordal Graphs: Characterization, Recognition, and Construction.

Pfender, Florian  
Visibility graphs of point sets in the plane

Prisner, Erich  
Generalizing the Wolf-Goat-Cabbage Problem

Rautenbach, Dieter  
Distance-Hereditary 5-Leaf Powers

Raynaud, Olivier  
Twin Vertices in Hypergraphs

de Ridder, H.N.  
On probe classes of graphs

de Ridder, Natalia  
Automatic Deduction of Induced Subgraphs of Some Infinite Families of Graphs

Robledo, Franco  
On the Generalized Steiner Problem with Network Reliability Conditions

Rykov, Ivan A.  
Polynomial approximation algorithms for solving resource-constrained project scheduling problem

Skums, Pavel  
Reconstruction of graphs with special homogeneous sets

Stern, Michal  
On the Optimal Stars Clustering Tree Problem

Tang, Jianmin  
Calculating the extremal number $\text{ex}(v; \{C_3, C_4, \ldots, C_n\})$

Pyatkin, Artem V.  
Incidentor coloring of weighted multigraphs

Wassermann, Alfred  
Construction of self-orthogonal linear codes

Zito, Michele  
Dominating sets of random recursive trees

Zverovich, Vadim  
The Computer System GRAPHOGRAPH

Further Participants

Bayer, Daniel; Böhm, Matthias; Bouter, Mounir; Brandstädt, Andreas; Das, Anita; Dinnis, Matthias; Glebov, Roman; Gronau, Hans-Dietrich; Haanpää, Harri; Haufschild, Martin; Hundt, Christian; Klembt, Tilo; Labahn, Roger; Le, Van Bang; Limouzy, Vincent; Manea, Florin; Pott, Alexander; Saito, Hiroo; Sill, Frank; Straßburg, Andreas; Tariq, Mohammad; Torge, Antje;
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<td>09.15</td>
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<td>09.30</td>
<td>Gyula O.H. Katona</td>
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Optimal Discrete Structures and Algorithms 2006

Tuesday, September 5, 2006

Room 224

09.00 – 10.00  Majid Sarrafzadeh
General Delay Budgeting on Directed Acyclic Graphs with Applications in CAD

10.00 – 10.30  Coffee break

10.30 – 11.30  Georg Gottlob
Second-Order Logic over Finite Structures – Report on a Research Programme

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There are exactly five biplanes with $k = 11$ | Victor Mitrana  
On Some Algorithmic Problems Regarding the Hairpin Completion | Dieter Rautenbach  
Distance-Hereditary 5-Leaf Powers |
| 14.00  | Reinhard Laue  
t-Wise Balanced Designs | Jianmin Tang  
Calculating the extremal number $\text{ex}(v; \{C_3, C_4, \ldots, C_n\})$ | Olivier Raynaud  
Twin Vertices in Hypergraphs |
| 14.30  | Alfred Wassermann  
Construction of self-orthogonal linear codes | Thomas Kalinowski  
Optimization of Multi-Threshold Circuits | Binh-Minh Bui-Xuan  
On Modular Decomposition Concepts: the case for Homogeneous Relations |
| 15.00  | Coffee break | | |
| 15.30  | Martin Grützmüller  
Enumeration of Super-simple Cyclic Block Designs of Small Order | Walid Ben-Ameur  
New bounds for the maximum cut problem | Stephan Dominique Andres  
The incidence game chromatic number |
| 16.00  | Harald Gropp  
Nonisomorphic configurations $n_k$ | Thomas Kalinowski  
Optimization of Multi-Threshold Circuits | Michal Stern  
On the Optimal Stars Clustering Tree Problem |
| 16.30  | Sascha Kurz  
Integral point sets over $\mathbb{Z}_n^m$ | Konrad Engel  
Optimal matrix-segmentation by rectangles | Frank Göring  
The rotational Dimension of a graph |
Wednesday, September 6, 2006

Room 224

09.00 – 10.00 Martin Charles Golumbic
Twenty Years of EPT Graphs: From Haifa to Rostock

10.00 – 10.30 Coffee break

10.30 – 11.30 Charles J. Colbourn
Detecting and Locating Interaction Faults

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