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PERSONAL DATA

Born: September 17, 1977 in Požega, Croatia
Citizenship: Croatian

CURRENT POSITION

Assistant Professor

June 2008 – now

EDUCATION

MPI für Informatik

Ph.D. studies in Computer Science

November 2002 – October 2007

PhD Thesis: Geometric Optimization and Querying – Exact & Approximate

University of the Saarland and MPI für Informatik

September 2001 – November 2002

Master studies in Computer Science

Department of Mathematics, University of Osijek

September 1996 – January 2001

Studies in Mathematics and Computer Science

RESEARCH INTERESTS

Algorithm Theory, in particular in the areas of *computational geometry, combinatorial/geometric optimization and approximation algorithms*.

Algorithm Engineering that integrate design, analysis, implementation, and experimental evaluation of algorithms.

TEACHING EXPERIENCE

List of courses taught: Algorithms Complexity, Data Networks and Services, Algorithms and Data Structures, Introduction to Programming, Introduction to Computer Science, Operational Research, Linear Optimization and Computational Geometry.

HONORS AND AWARDS

IMPRS Fellowship for both, Master and Ph.D. studies in Computer Science. Max-Planck Institut für Informatik, Saarbrücken, Germany

PUBLICATIONS

Journal Publications:

1. Rene Beier, Stefan Funke, Domagoj Matijević and Peter Sanders
Energy-Efficient Paths In Radio Networks
to appear in *Algorithmica*
2. Khaled Elbassioni, Erik Krohn, Domagoj Matijević, Julian Mestre and Domagoj Ševerdija
Improved Approximations for Guarding 1.5-Dimensional Terrains
to appear in *Algorithmica*
3. Domagoj Matijević and Ralf Oswald
Finding the Theta-Guarded Region
to appear in *Computational Geometry: Theory and Applications (CGTA)*
4. Jens Maue, Peter Sanders and Domagoj Matijević *Goal Directed Shortest Path Queries Using Precomputed Cluster Distances*
ACM Journal of Experimental Algorithmics (ACM JEA), 14/3 - Special Issue, 2009
5. Soeren Laue and Domagoj Matijević
Approximating k-hop Minimum Spanning Trees in Euclidean metrics
Information Processing Letters (IPL) , 107/3-4:96-101, 2008.
6. Stefan Funke, Domagoj Matijević and Peter Sanders
Constant Time Queries for Energy Efficient Paths in Multi-Hop Wireless Networks
Journal of Computing and Information Technology (CIT), 16/2:119-130, 2008
7. Friedrich Eisenbrand, Stefan Funke, Andreas Karrenbauer and Domagoj Matijević
Energy-Aware Stage Illumination
International Journal of Computational Geometry and Applications (IJCGA), 18/1-2:107-129, 2008

in Refereed Proceedings:

1. D. Matijević, G. Martinović, P. Taler.
DISTRIBUTER - The Distributed System for Efficient Execution of Parallel Programs
33rd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO), Opatija, 2010
2. K. Elbassioni, D. Matijević, D. Ševerdija.
Guarding 1.5D Terrains with Demands
26th European Workshop on Computational Geometry (EuroCG'10), pp. 133-136, Dortmund, 2010
3. H. Bast, S. Funke, D. Matijević.
TRANSIT: Ultrafast Shortest-Path Queries with Linear-Time Preprocessing
(9th DIMACS Implementation Challenge – Shortest Path (DIMACS), pp. 175–192, AMS, 2009)
4. H. Bast, S. Funke, D. Matijević, P. Sanders, D. Schultes.
In transit to constant time shortest-path queries in road networks
(Proc. of Workshop on Algorithm Engineering and Experiments (ALENEX), 2007)
5. S. Funke, T. Malamatos, D. Matijević, N. Wolpert.
(Approximate) Conic Nearest Neighbors and the induced Voronoi Diagram
(Proc. of 18th Canadian Conference on Computational Geometry (CCCG), 2006, Kingston, Ontario)
6. J. Maue, P. Sanders, D. Matijević.
Goal Directed Shortest Path Queries Using Precomputed Cluster Distances
(Proc. of 5th International Workshop on Experimental Algorithms (WEA), Menorca Island), Volume 4007 in LNCS, pages 316 - 327, Springer, 2006.
7. F. Eisenbrand, S. Funke, A. Karrenbauer, D. Matijević.
Energy-Aware Stage Illumination
(Proc. of 21st ACM Symposium on Computational Geometry (SoCG) 2005, Pisa)

8. S. Funke, D. Matijevic, P. Sanders.
Constant Time Queries for Energy Efficient Paths in Multi-Hop Wireless Networks
(Proc. of AlgorithmS for Wireless And mobile Networks (A_SWAN) 2004, Boston)
9. S. Funke, D. Matijevic, P. Sanders.
Approximating Energy Efficient Paths in Wireless Multi-Hop Networks,
(Proc. of 11th Annual European Symposium on Algorithms (ESA), Budapest), Volume 2832 in LNCS, pages
230-241. Springer, 2003.

PATENTS

Patent application title: Method and device for determining the length of a shortest path in a network

Inventors: Holger Bast, Stefan Funke and Domagoj Matijevic

Assignees: Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V.