

# DR. DOMAGOJ MATIJEVIĆ

---

Department of Mathematics  
J.J. Strossmayer University of Osijek  
Trg Lj. Gaja 6  
31 000 Osijek  
Croatia

Phone: +385 31 224 825  
Fax: +385 31 224 801  
domagoj@mathos.hr  
<http://www.mathos.hr/~domagoj/>

## 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.