

Dimitrios Michail

PhD, Max-Planck-Institute, 2006

Department of Informatics and Telematics

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Biography

place of birth Athens, Greece
date of birth 14/04/1979
nationality Hellenic

Education

- 2003-2006 **PhD in Computer Science.**
Summa cum laude
“Minimum Cycle Basis, Algorithms & Applications”
Advisor: Prof. Dr. Kurt Mehlhorn
Max-Planck Institut für Informatik, Saarbrücken, Germany
- 2002-2003 **MSc in Computer Science.**
First class honours degree
Max-Planck Institut für Informatik, Saarbrücken, Germany
- 1997-2002 **Diploma in Electronics and Computer Engineering.**
First class honours degree
“SCLOB - A load balanced P2P content sharing network”
Advisor: Prof. Dr. Peter Triantafillou
Technical University of Crete, Chania, Greece

Research Interests

Graph Algorithms (Minimum Cycle Bases, Matchings with Preferences)
Experimental Algorithmics and External-Memory Algorithms
Computation Geometry and GIS

Employment

- Sep 2009 - **Lecturer**, Department of Informatics and Telematics, Harokopion University, Athens, Greece.
- Oct 2007 - Jul 2008 **Postdoctoral Researcher**, INRIA (French National Institute for Research in Computer Science and Control), Sophia-Antipolis Méditerranée, Nice, France.
- Dec 2006 - Sep 2007 **Postdoctoral Researcher**, Max-Planck-Institut für Informatik, Saarbrücken, Germany.

- Jan 2006 - Dec 2006 **Project of the German-Israeli Foundation (GIF) on Efficient Graph Algorithms**, *Max-Planck-Institut für Informatik*, Saarbrücken, Germany.
- Oct 2002 - Dec 2006 **Researcher**, *Algorithms and Complexity Department*, Max-Planck-Institute for Informatics, Saarbrücken, Germany.
- Oct 2001 - Sep 2002 **Researcher**, *Software Systems and Network Application Laboratory*, Technical University of Crete, Chania, Greece.

Conference Program Committees

- ICTCS'07 10th Italian Conference on Theoretical Computer Science.

Awards, Scholarships and Competitions

- 2007–2008 **Alain Bensoussan Fellowship**.
European Research Council for Informatics and Mathematics
- 2006–2007 **Post-doctoral scholarship**.
Max-Planck Society
- 2003–2006 **Scholarship for PhD degree**.
International Max-Planck Research School
- 2002–2003 **Scholarship for MSc degree**.
International Max-Planck Research School
- 2000-2001 **Excellence award in Technical University of Crete**.
Technical Chamber of Greece
- 2000 **Greek Collegiate Programming Contest**, *Athens, Greece*.
Representing Technical University of Crete
- 1999-2000 **Excellence award in Technical University of Crete**.
Technical Chamber of Greece
- 1999,2000,2001 **SouthEastern European ACM Collegiate Programming Contest**, *Bucharest, Romania*.
Representing Technical University of Crete

Theses

- [1] *Minimum Cycle Basis, Algorithms & Applications*. PhD thesis, Max-Planck-Institut für Informatik and Universität des Saarlandes, Saarbrücken, Germany, 2006
- [2] *SCLOB - A load balanced P2P content sharing network*. Diploma thesis, Technical University of Crete, Chania, Greece, 2002

Manuscripts

- [3] with C-C. Huang, T. Kavitha, and M. Nasre. *Bounded Unpopularity Matchings*. Submitted to *Algorithmica*.

Journal Publications

- [4] with K. Mehlhorn. *Minimum Cycle Bases: Faster and Simpler*. *ACM Transactions on Algorithms*. To appear.

- [5] with T. Kavitha, and K. Mehlhorn. *New Approximation Algorithms for Minimum Cycle Bases of Graphs*. Algorithmica. To appear.
- [6] with T. Kavitha, C. Liebchen, K. Mehlhorn, R. Rizzi, T. Ueckerdt, and K. A. Zweig. *Cycle Bases in Graphs: Characterization, Algorithms, Complexity and Applications*. Computer Science Review, 3(4), 199-243, 2009.
- [7] with T. Kavitha, K. Mehlhorn, and K. Paluch. *An $O(m^2n \log n)$ Algorithm for Minimum Cycle Basis of Graphs*. Algorithmica, 52(3): 333-349, 2008.
- [8] *Reducing Rank-Maximal to Maximum Weight Matching*. Theoretical Computer Science, 389(1-2):125-132, 2007.
- [9] with C. Gotsman, K. Kaligosi, K. Mehlhorn, and E. Pyrga. *Cycle Bases of Graphs and Sampled Manifolds.*, Computer Aided Geometric Design, 24(8-9):464-480, 2007.
- [10] with T. Kavitha, K. Mehlhorn, and K. Paluch. *Strongly Stable Matchings in Time $O(nm)$ and Extension to the Hospitals-Residents Problem*. ACM Transactions on Algorithms, 3(2), 2007.
- [11] with K. Mehlhorn. *Implementing Minimum Cycle Basis Algorithms*. ACM Journal of Experimental Algorithmics, 11(2):1-14, 2006. Selected papers from WEA'05.
- [12] with R.W. Irving, T. Kavitha, K. Mehlhorn, and K. Paluch. *Rank-Maximal Matchings*. ACM Transactions on Algorithms, 2(4):602-610, 2006. Invited paper from SODA'04.

Conference Publications

- [13] with C-C. Huang, T. Kavitha, and M. Nasre. *Bounded Unpopularity Matchings*. In Proceedings of the 11th Scandinavian Workshop on Algorithm Theory (SWAT'08).
- [14] with T. Kavitha, and K. Mehlhorn. *New Approximation Algorithms for Minimum Cycle Bases of Graphs*. In Proceedings of the 24th International Symposium on Theoretical Aspects of Computer Science (STACS'07).
- [15] with K. Mehlhorn. *Implementing Minimum Cycle Basis Algorithms*. In Proceedings of the 4th International Workshop on Efficient and Experimental Algorithms (WEA'05), volume 3503 of LNCS, pages 32-43, 2005.
- [16] with T. Kavitha, K. Mehlhorn, and K. Paluch. *A Faster Algorithm for Minimum Cycle Basis of Graphs*. In Proceedings of the 31st International Colloquium on Automata, Languages and Programming (ICALP'04).
- [17] with T. Kavitha, K. Mehlhorn, and K. Paluch. *Strongly Stable Matchings in Time $O(nm)$ and Extension to the Hospitals-Residents Problem*. In Proceedings of the 21st International Symposium on Theoretical Aspects of Computer Science (STACS'04).
- [18] with R.W. Irving, T. Kavitha, K. Mehlhorn, and K. Paluch. *Rank-maximal matchings*. In Proceedings of the 15th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA'04).

Service as Referee

- journals Journal of Scheduling, Journal of Graph Algorithms and Applications, Theoretical Computer Science
- conferences ICALP, ESA, STACS, SOCG, FSTTCS, LATIN

Software Portfolio

2004–2008 **Minimum Cycle Basis, LEDA Extension Package (LEP).**

<http://www.algorithmic-solutions.com/enleps.htm>

This is a LEDA extension library which contains implementations of exact and approximation algorithms in order to compute minimum cycle bases in edge-weighted undirected and directed graphs.

2004–2008 **Rank-Maximal Matchings, LEDA Extension Package (LEP).**

<http://www.algorithmic-solutions.com/enleps.htm>

This is a LEDA extension library which implements algorithms which compute rank-maximal matchings in bipartite graphs.

Technical Skills

OS	Linux, Unix, Windows	administration	Linux, Apache, Mailman
programming	C/C++/C#, JAVA	scripting	Shell, PHP
scientific	Matlab	typography	L ^A T _E X, T _E X
web design	HTML, XML, CSS	database	SQL

Languages

Greek	Native
English	Excellent
German	Good

References

on request