

## NIKOLA MILOSAVLJEVIĆ

PhD student, Computer Science Department, Stanford University

### Contact

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### Born

12/21/1978 in Požega (western Serbia)

### Nationality

Serbian

### Citizenship

Serbian

### Education

- 09/2003–present    PhD program in Computer Science, Stanford University, Stanford, CA, USA  
                          Advisor: professor Leonidas Guibas
- 10/2002–07/2003    Pre-doctoral school in Computer Science and Telecommunications  
                          Swiss Federal Institute of Technology, Lausanne, Switzerland
- 07/1997–05/2002    BSc in Electrical Engineering, University of Belgrade, Serbia  
                          Diploma thesis “Adaptive Space-time Block Codes” (with professor Dušan Drajić)  
                          GPA 10/10, accomplished by two students in 50 year long school history

### Academic Interests

- Algorithms for location-unaware wireless sensor networks
  - Infrastructure establishment, routing, virtual coordinates, gossip algorithms...
- Computational geometry
- Design and analysis of algorithms, optimization, applied mathematics

### Publications

1. D. Dumitriu, S. Funke, M. Kutz, N. Milosavljević. On the Locality of Extracting a 2-Manifold in  $\mathbb{R}^3$ . accepted at the 11th Scandinavian Workshop on Algorithm Theory (SWAT) 2008, preliminary version at the 24th European Workshop on Computational Geometry (EWCG) 2008.
2. A. Ene, W. Horne, N. Milosavljević, P. Rao, R. Schreiber, R. E. Tarjan. Fast Exact and Heuristic Methods for Role Minimization Problems. Accepted at the 13th ACM Symposium on Access Control Models and Technologies (SACMAT), 2008.
3. H. Lin, M. Lu, N. Milosavljević, J. Gao, L. J. Guibas. Composable Information Gradients in Wireless Sensor Networks. Proceedings of the 7th International Conference on Information Processing in Sensor Networks (IPSN), 2008.
4. D. Dumitriu, S. Funke, M. Kutz, N. Milosavljević. How Much Geometry It Takes to Reconstruct a 2-Manifold in  $\mathbb{R}^3$ . Proceedings of the 9th Workshop on Algorithm Engineering and Experiments (ALENEX), 2008.
5. J. Gao, L. Guibas, J. Hershberger, N. Milosavljević. Sparse Data Aggregation in Sensor Networks. Proceedings of the 6th International Conference on Information Processing in Sensor Networks (IPSN), 2007.
6. A. Nguyen, N. Milosavljević, Q. Fang, J. Gao, L. J. Guibas. Landmark Selection and Greedy Landmark-Descent Routing for Sensor Networks. Proceedings of IEEE INFOCOM 2007.
7. S. Funke, N. Milosavljević. Guaranteed-delivery Geographic Routing Under Uncertain Node Locations. Proceedings of IEEE INFOCOM 2007.

8. S. Funke, N. Milosavljević. Network Sketching or: "How Much Geometry Hides in Connectivity? – Part II". Proceedings of the 18th ACM-SIAM Symposium on Discrete Algorithms (SODA) 2007.
9. S. Funke, N. Milosavljević. Infrastructure-Establishment from Scratch in Wireless Ad-Hoc Networks. Proceedings of the 1st IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS), 2005.

### Research

- 01/2004-present      Research assistant, Computational Geometry Lab, Stanford University  
07/2007-09/2007      Summer Internship, HP Labs, Palo Alto, CA, USA  
Worked on algorithms for covering bipartite graphs by complete bipartite subgraphs, as a way of clustering and compressing them.
- 11/2005, 09/2006      Research visits to the Max-Planck Institut für Informatik, Saarbrücken, Germany  
Worked with Stefan Funke on algorithms for wireless networks.
- 01/2003-06/2003      Semester project, Algorithmics Lab, Swiss Federal Institute of Technology Lausanne  
Studied and implemented list-decoding algorithms for Reed-Solomon codes using the displacement method, and various algorithms for performing the polynomial factorization step of the decoding (with professor Amin Shokrollahi).
- 09/2002–12/2002      Visiting research assistant, Division of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA  
Worked on iterative decoding schemes (with professors Aleksandar Kavčić and Vahid Tarokh).

### Teaching

- 04/2007-06/2007      Teaching assistant, CS154 Introduction to Automata and Complexity Theory, CS Department, Stanford University
- 04/2006-07/2006      Teaching assistant, CS368 Geometric Algorithms, CS Department, Stanford University
- 01/2005-04/2005      Teaching assistant, CS348A Geometric Modelling, CS Department, Stanford University

### Employment

- 09/2000–06/2002      Lab assistant, Electronics Lab, School of Electrical Engineering, University of Belgrade  
Supervised lab sessions for undergraduate courses.
- 09/2001–12/2001      Intern, Computer Center, Universidad Pontificia Comillas, Madrid, Spain  
Worked on network administration, computer support and maintenance

### Academic Awards and Honors

- 03/2003      Best student in 2002, University of Belgrade
- 12/2002      Award for exceptional undergraduate accomplishment, SoEE alumni association
- 12/2002      Best student in the Division of Electronics, Telecommunications and Automatics, SoEE
- 02/2002      Scholarship, Karađorđević Family Foundation
- 01/2002      Award for excellent academic performance, Serbian Ministry of Education
- 09/2000      Award for excellent academic performance, Embassy of Norway in Belgrade
- 1998–2002      Scholarship, Serbian Ministry of Education, Foundation for Young Artists and Scientists

### Language Proficiency

Serbian native, English fluent

### Programming

C++, Matlab,  $\text{\LaTeX}$ , HTML

### Hobbies

Tennis, music

### References

Available upon request