Özgür Özkan

Contact Information

Department of Computer Science and Engineering
NYU School of Engineering
2 MetroTech Center, 10.032
Brooklyn, NY 11201 USA

Office : +1 (646) 997-4083
Cell : +1 (201) 616-0626
E-mail : ozgurozkan@gmail.com
WWW : www.ozgurozkan.com

Research Interests

I am broadly interested in the design and analysis of algorithms and data structures. My current work focuses on algorithmic problems arising in information retrieval, fundamental data structuring problems in the external memory model, and dynamic graph algorithms.

Education

New York University – School of Engineering
Computer Science and Engineering Department
Ph.D., Computer Science, 2013 (Advisor: John Iacono)
Thesis: "Novel Applications of Amortized Analysis"

New Jersey Institute of Technology
Albert Dorman Honors College
B.S., Computer Science, 2006 (Advisor: Artur Czumaj)

Employment

New York University – School of Engineering — New York, USA
Research Assistant Professor — (2014 – current)

New York University – Abu Dhabi Computer Science — Abu Dhabi, UAE
Visiting Professor of Practice — (Fall 2013)

Teaching Experience

Programming Languages	(NYU AD, CS-AD 211, Fall 2013)
Introduction to Programming & Problem Solving	(NYU SoE, CS 5303, 2012 – current)
Foundations of Computer Science	(NYU SoE, CS 6003, 2013 – current)
Design & Analysis of Algorithms I	(NYU SoE, CS 6033, Spring 2013)
Design & Analysis of Algorithms II	(NYU SoE, CS 6043, Fall 2015)
Discrete Mathematics	(NYU SoE, MA 2314, Spring 2015)

Professional Service

Programming Committee:
– Algorithm Engineering and Experiments (ALENEX 2016)

Referee (Conference):
- European Symposium on Algorithms (ESA 2011, ESA 2014, ESA 2015)
- Symposium on Computational Geometry (SoCG 2015)
- Symposium on Theoretical Aspects of Computer Science (STACS 2013)
- ACM-SIAM Symposium on Discrete Algorithms (SODA 2013)
- Symposium on the Theory of Computing (STOC 2011, STOC 2012)
- Fun with Algorithms (FUN 2012)

Referee (Journal):
- SIAM Journal on Computing
- ACM Transactions on Algorithms
- Algorithmica
- Computational Geometry Theory and Applications
- Discrete & Computational Geometry

Preprints

Document Routing and Index Reorganization Strategies in Distributed Search Engines. Constantinos Dimopoulos, Özgür Özkan, Abrar Sheikh, and Torsten Suel. In submission.

A Tight Lower Bound for Decrease-Key in the Pure Heap Model. John Iacono and Özgür Özkan. In submission.

Papers

Max-Throughput for (Conservative) k-of-n Testing. Lisa Hellerstein, Özgür Özkan, and Linda Sellie. To appear in Algorithmica.

A preliminary version appeared in the proceedings of the 22nd International Symposium on Algorithms and Computation (ISAAC 2011), volume 7074, pages 703-713, Lecture Notes in Computer Science. Springer, 2011.

Cache-Oblivious Persistence. Pooya Davoodi, Jeremy T. Fineman, John Iacono, and Özgür Özkan. In the proceedings of the 22nd Annual European Symposium on Algorithms (ESA 2014). **Recipient of the Best Paper Award.**

Why some heaps support constant-amortized-time decrease-key operations, and others do not. John Iacono and Özgür Özkan. In the proceedings of the 41st International Colloquium on Automata, Languages and Programming (ICALP 2014), Part I, volume 8572, pages 637-649, Lectures Notes in Computer Science. Springer, 2014.

The Complexity of Order Type Isomorphism. Greg Aloupis, John Iacono, Stefan Langerman, Özgür Özkan, and Stefanie Wuhrer. In the proceedings of the 25th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2014), pages 405-415.

Combining Binary Search Trees. Erik D. Demaine, John Iacono, Stefan Langerman, and Özgür Özkan. In the proceedings of the 40th International Colloquium on Automata, Languages and Programming (ICALP 2013), Part I, volume 7965, pages 388-399, Lectures Notes in Computer Science. Springer, 2013.

Establishing Strong Connectivity Using Optimal Radius Half-Disk Antennas. Greg Aloupis, Mirela Damian, Robin Flatland, Matias Korman, Özgür Özkan, David Rappaport, and Stefanie Wuhrer. Computational Geometry (CGTA), Volume 46, Issue 3, April 2013, pages 328-339.

A preliminary version appeared in the proceedings of the 23rd Annual Canadian Conference on Computational Geometry (CCCG 2011).

Finding the Thinnest V-shape with Few Outliers. Boris Aronov, John Iacono, Özgür Özkan, and Mark Yagnatinsky. In the proceedings of the 25th Canadian Conference on Computational Geometry (CCCG 2013).

A preliminary version appeared in the 22nd Annual Fall Workshop on Computational Geometry (FWCG 2012).

Locating a Line at Unit Distance with Two Agents. Greg Aloupis, John Iacono, Jonathan Lenchner, and Özgür Özkan. In the Thailand-Japan Joint Conference on Computational Geometry and Graphs (TJJCCGG 2012).

Order Type Invariant Labeling and Comparison of Point Sets. Greg Aloupis, Muriel Dulieu, John Iacono, Stefan Langerman, Özgür Özkan, Suneeta Ramaswami, and Stefanie Wuhrer. In the 28th European Workshop on Computational Geometry (EuroCG 2012).

Mergeable Dictionaries. John Iacono and Özgür Özkan. In the proceedings of the 37th International Colloquium on Automata, Languages and Programming (ICALP 2010), Part I, volume 6198, pages 164-175, Lecture Notes in Computer Science. Springer, 2010.

Presentations

Routing and Index Reorganization Strategies in Distributed Search Engines.
2015 Columbia University and NYC ASCENT Postdoc Research Symposium.

Cache-Oblivious Persistence.
Polytheory Seminar, New York University.

Cache-Oblivious Persistence.
Yahoo! Labs, New York.

Cache-Oblivious Persistence.
22nd European Symposium on Algorithms (ESA 2014).

Cache-Oblivious Persistence.
6th Workshop on Massive Data Algorithmics (MASSIVE 2014).

Combining Binary Search Trees.
Polytheory Seminar, New York University.

Max-Throughput for (Conservative) k-of-n Testing.
22nd International Symposium on Algorithms and Computation (ISAAC 2011).

Max-Throughput for (Conservative) k-of-n Testing.
Polytheory Seminar, New York University.

References

John Iacono
Professor
Computer Science and Engineering Department
NYU School of Engineering
Brooklyn, NY 11217
Tel: (646) 997–3949
iacono@nyu.edu
http://john.poly.edu

Lisa Hellerstein
Professor
Computer Science and Engineering Department
NYU School of Engineering
Brooklyn, NY 11217
Tel: (646) 997–3689
lisa.hellerstein@nyu.edu
http://cse.poly.edu/hstein

Stefan Langerman
Directeur de recherches du F.R.S.-FNRS
Département d'Informatique
Université Libre de Bruxelles
Brussels, Belgium
stefan.langerman@ulb.ac.be
http://cgm.cs.mcgill.ca/~sl/

Nasir Memon
Professor and Department Head
Computer Science and Engineering Department
NYU School of Engineering
Brooklyn, NY 11217
Tel: (646) 997–3970
memon@nyu.edu
http://isis.poly.edu/memon

Torsten Suel
Professor
Computer Science and Engineering Department
NYU School of Engineering
Brooklyn, NY 11217
Tel: (646) 997–3354
torsten.suel@nyu.edu
http://cis.poly.edu/suel