

Ravishankar Krishnaswamy

CONTACT INFORMATION	7513 Gates-Hillman Center Computer Science Department Carnegie Mellon University Pittsburgh, PA 15213	Phone: (412) 973-2186 Email: ravishan@cs.cmu.edu Web: http://www.cs.cmu.edu/~ravishan
INTERESTS	I am broadly interested in the design and analysis of algorithms which can handle <i>uncertainty in the input</i> , more specifically topics such as online and stochastic optimization. I am also interested in other areas such as green computing, differential privacy, and algorithmic mechanism design.	
EDUCATION	Ph.D in Computer Science Carnegie Mellon University Adviser: Prof. Anupam Gupta	(Fall 2007-present) (Expected May 2012)
	B.Tech in Computer Science Indian Institute of Technology Madras	(2003-2007)
RESEARCH PUBLICATIONS	<i>Online and Stochastic Survivable Network Design</i> (with Anupam Gupta and R. Ravi). STOC 2009. To appear the SICOMP special issue	
	<i>Scheduling with Outliers</i> (with Anupam Gupta, Amit Kumar and Danny Segev). APPROX 2009	
	<i>Tree Embeddings for 2-Edge-Connected Network Design</i> (with Anupam Gupta and R. Ravi). SODA 2010	
	<i>A Constant Factor Approximation Algorithm for Generalized Min-Sum Set Cover</i> (with Nikhil Bansal and Anupam Gupta). SODA 2010	
	<i>Scheduling Jobs with Varying Parallelizability to Reduce Variance</i> (with Anupam Gupta, Sungjin Im, Benjamin Moseley and Kirk Pruhs). SPAA 2010	
	<i>Better Scalable Algorithms for Broadcast Scheduling</i> (with Nikhil Bansal and Viswanath Nagarajan). ICALP 2010	
	<i>Scalably Scheduling Power-Heterogeneous Processors</i> (with Anupam Gupta and Kirk Pruhs). ICALP 2010	
	<i>Network-Wide Deployment of Intrusion Detection and Prevention Systems</i> (with Anupam Gupta, Michael K. Reiter and Vyas Sekar). CoNEXT 2010	
	<i>The Matroid Median Problem</i> (with Viswanath Nagarajan and Barna Saha). SODA 2011	
	<i>On Capacitated Set Cover Problems</i> (with Nikhil Bansal and Barna Saha). APPROX 2011	
	<i>Approximation Algorithms for Correlated Knapsack and Non-Martingale Bandits</i> (with Anupam Gupta, Marco Molinaro and R. Ravi). FOCS 2011	
	<i>Inapproximability Results for the Multi-Level Facility Location Problem</i> (with Maxim Sviridenko). SODA 2012	

Approximation Algorithms for Stochastic Orienteering

(with Anupam Gupta, Viswanath Nagarajan and R. Ravi). SODA 2012

Scheduling Heterogeneous Machines isn't as easy as you think

(with Anupam Gupta, Sungjin Im, Benjamin Moseley and Kirk Pruhs). SODA 2012

Online Primal-Dual Algorithms for Convex Programs

(with Anupam Gupta and Kirk Pruhs). Submitted

Unconditional Differentially Private Mechanism for Linear Queries

(with Aditya Bhaskara and Kunal Talwar). Submitted

AWARDS AND
HONORS

1. Recipient of the IBM PhD Fellowship 2010-2011.
2. Ranked 2nd in the Computer Science Department, IIT Madras
3. Secured 11th place in the 2006 ACM-ICPC Programming Contest Regionals.

RESEARCH
EXPERIENCE

Graduate Research, Carnegie Mellon University (Fall 2007-present)

Worked with Prof. Anupam Gupta, Prof. Kirk Pruhs, and Prof. R. Ravi on various topics in online and stochastic optimization for network design, scheduling, and green computing problems.

Summer Intern, Microsoft Research, Silicon Valley (Summer 2011)

Worked with Dr. Kunal Talwar and Dr. Udi Wieder on topics in scheduling and differential privacy.

Summer Intern, IBM Research, Yorktown Heights (Summer 2010)

Worked with Prof. Nikhil Bansal, Dr. Viswanath Nagarajan, and Dr. Maxim Sviridenko on problems in facility location and capacitated covering problems.

Summer Intern, IBM Research, Yorktown Heights (Summer 2009)

Worked with Prof. Nikhil Bansal and Dr. Viswanath Nagarajan on broadcast scheduling.

Summer Intern, Northeastern University (Summer 2006)

Worked with Prof. Ravi Sundaram on problems in algorithmic game theory.

TEACHING
EXPERIENCE

1. **Probability and Computing (Fall 2010)**. Work involved designing and handling recitation lectures, grading homeworks and exams, and holding office hours.
2. **Great Ideas in Theoretical Computer Science (Fall 2008)**. Work involved designing and handling recitation lectures, preparing problem sets and exams, grading homeworks and exams, and holding office hours.

REFERENCES

1. **Prof. Anupam Gupta**. Computer Science Department, Carnegie Mellon University.
Email: anupamg@cs.cmu.edu
2. **Prof. Nikhil Bansal**. Department of Mathematics and Computer Science, TU Eindhoven.
Email: bansal@gmail.com
3. **Prof. Kirk Pruhs**. Computer Science Department, Univ. of Pittsburgh.
Email: kirk@cs.pitt.edu
4. **Prof. R. Ravi**. Tepper School of Business, Carnegie Mellon University.
Email: ravi@cmu.edu
5. **Dr. Kunal Talwar**. Microsoft Research, Silicon Valley.
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