

# Pushkar Tripathi

Email:pushkar.tripathi@gatech.edu

<http://www.cc.gatech.edu/~tpushkar>

Ph:404-376-6264

---

## RESEARCH INTERESTS

Theoretical Computer Science particularly in the area of randomized algorithms and approximation algorithms.

## EDUCATION

**Georgia Institute of Technology**, Atlanta, GA

Ph.D., Computer Science. GPA 4.0

Expected June 2012

**Indian Institute of Technology (IIT) Delhi**, India

B.Tech., Computer Science & Engineering. GPA 9.42/10

July 2008

## PROFESSIONAL EXPERIENCE

- **Google Research**, New York City, NY (Internship) May-Aug 2011  
Worked with Gagan Goel on a simple linear time algorithm for maximum matching.
- **Google Research**, Mountain View, CA (Internship) May-Aug 2010  
Worked with Aranyak Mehta on a variant of the online bipartite matching problem.
- **Google**, Pittsburgh, PA (Internship) Jun-Aug 2009  
Worked with the ad serving group and proposed improvements to the algorithms for ad selection and placement.
- **Microsoft Research**, Bangalore, India (Internship) May-July 2007  
Worked with Rigorous Software Engineering (RSE) group on a novel approach to detect faults in software prior to execution.

## PUBLICATIONS

- Chinmay Karande, Aranyak Mehta, Pushkar Tripathi. "Online Bipartite Matching in the Unknown Distributional Model". In *ACM Symposium on Theory of Computing (STOC) 2011*, San Jose, USA.
- Gagan Goel, Pushkar Tripathi and Lei Wang. "Approximation Algorithms for Multi-agent Combinatorial Problems with Discounted Price Functions". In *Foundations of Software Technology and Theoretical Computer Science (FSTTCS) 2010*, Chennai, India.
- Gagan Goel, Chinmay Karande, Pushkar Tripathi and Lei Wang. "Approximability of Combinatorial Problems with Multi-agent Submodular Cost Functions". In *IEEE Symposium on Foundations of Computer Science (FOCS) 2009*, Atlanta, USA.
- Pushkar Tripathi, Rohan Jain, Srikanth Kurra and P.R. Panda. "REWired: Register Write Inhibition by Resource Dedication", In *Asia Pacific Design Automation Conference (ASPDAC) 2008*, Seoul, Korea.
- Ravish Mehra, Pushkar Tripathi, Niloy Mitra and Alla Sheffer. "Visibility of Noisy Point Cloud Data". In *Shape Modelling International 2010*, Aix-en-Provence, France. **Invited to special issue of Computers & Graphics.**

## MANUSCRIPTS

- Satoru Iwata, Prasad Tetali and Pushkar Tripathi. “Approximating Minimum Linear Ordering Problems”. Manuscript 2011.
- Kevin Costello, Prasad Tetali and Pushkar Tripathi. “Matching with Commitments”. Manuscript 2011.
- Gagan Goel and Pushkar Tripathi. “Matching with our Eyes Closed”. Manuscript 2011.
- G. Ramalingam, Pushkar Tripathi and L. Valega. “Inferring Top-Level Variables from Executables”. Technical Report, *Microsoft Research India* 2007.

## ACADEMIC AWARDS

- Algorithms Randomness Center Fellowship in Computer Science, Fall 2011.
- Outstanding Graduate Research Assistant in Computer Science, Fall 2010.
- ACO student fellowship for the year 2008-2009.
- 13<sup>th</sup> position worldwide in the Algorithms competition of Microsoft Imagine Cup, 2008.
- Placed 6<sup>th</sup> in the Asia regionals of ACM Inter Colligate Programming Contest, 2008.
- Secured All India Rank 68 among 200,000 students at the Indian Institute of Technology Joint Entrance Exam (IIT-JEE).
- Winner of the National Talent Search Scholarship(NTSE), one of the most prestigious scholarships awarded by the Directorate of Education, India.

## SELECTED TALKS

- “Matching with Commitments.”. China Theory Week (Invited), Aarhus University, Denmark, Oct 2011.
- “Matching with our Eyes Closed.”. Google Research Seminar, New York City NY, Aug 2011.
- “Approximability of Submodular Combinatorial Optimization Problems ”. Approximation Algorithms Workshop (Invited), Princeton NJ, June 2011.
- “Online bipartite matching in the unknown distribution model”. Symposium of Theory of Computing, San Jose CA, June 2011.
- “Recent Developments in Calculating Approximate Nash-equilibrium”. Georgia Tech ACO Seminar, Nov 2010.
- “Combinatorial Optimization with Submodular Utility Function”. Georgia Tech ACO Seminar, Oct 2009.
- “Power Efficient Methods in EDA”. Asia Pacific Design Automation Conference, Seoul, Jan 2008.

## PROGRAMMING LANGUAGES AND TOOLS

- C, C++, Python, CPLEX, GLPSOL