

# ANEESH SHARMA

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## RESEARCH INTERESTS

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Social Network Theory, Randomized Algorithms, Algorithmic Game Theory

## EDUCATION

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<b>Stanford University, Stanford, CA</b> Ph.D. Computational and Mathematical Engineering Advisor: Prof. Rajeev Motwani	09/2004 – 2010 (Expected) GPA (4.1/4.0)
<b>Stanford University, Stanford, CA</b> M.S. Computational and Mathematical Engineering	09/2004 – 12/2006 GPA (3.8/4.0)

## RELEVANT COURSEWORK

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Randomized Algorithms	Geometric Algorithms
Foundations of Sponsored Search	Advanced Graph Algorithms
Algorithmic Game Theory	Information Networks
Approximation Algorithms	Hardness of Approximation
Stochastic Processes	Information Theory
Discrete Mathematics and Algorithms	Convex Optimization
Computational Methods in Data Mining	Large Scale Computing
Stochastic Modeling	Stochastic Methods in Engineering
Numerical Linear Algebra	Numerical Optimization

<b>Indian Institute of Technology, Delhi</b> B.Tech. Production and Industrial Engineering	08/1998 – 05/2002
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## PROFESSIONAL EXPERIENCE

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<b>Theory Group, Prof. Rajeev Motwani, Stanford University, CA</b> Research Associate	09/2007 – Present
<ul style="list-style-type: none"><li>Development and analysis of algorithms for social network theory</li></ul>	
<b>Search Labs, Sreenivas Gollapudi, Microsoft Research</b> Summer Intern	06/2008 – 09/2008
<ul style="list-style-type: none"><li>Development and analysis of algorithms for diversification of search results</li></ul>	
<b>Search Quality, Paul Haahr, Google Inc</b> Summer Intern	07/2007 – 09/2007
<ul style="list-style-type: none"><li>Designed and implemented a disambiguation tool using Wikipedia</li><li>Built an inverted index over Wikipedia from ground-up and an algorithm to resolve ambiguities among input text</li><li>The index is currently being used by a couple of teams in Google</li></ul>	

**Geometry Group, Prof. Leonidas Guibas, Stanford University, CA**  
Research Associate

06/2006 – 06/2007

- Development, analysis and implementation of algorithms for reverse nearest neighbor search

**Stanford University Medical Media and Information Technologies (SUMMIT),** 09/2004 – 04/2006  
**Stanford University, CA**  
Research Associate

- Development of an open source surgical simulation system with the Stanford - NASA Bio-computation Center (<http://spring.stanford.edu/>)
- Developed and implemented algorithms for enhanced visual experience and improving software performance using faster algorithms and code optimization.

**Indian Institute of Technology, Delhi**  
Research Associate

06/2002 – 08/2004

- Development of geometric meshes for folded airbags for use in crash simulations
- Developed and implemented a novel algorithm which minimizes change in the surface area and geometry of the airbag during folding

## PUBLICATIONS<sup>1</sup>

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- David Arthur, Rajeev Motwani, Aneesh Sharma, and Ying Xu. Pricing strategies for viral marketing on Social Networks. <http://arxiv.org/abs/0902.3485>, under submission
- David Arthur, Steve Oudot, and Aneesh Sharma. Approximating Reverse Nearest Neighbors using Locality Sensitive Hashing, under submission
- Sreenivas Gollapudi and Aneesh Sharma. An axiomatic approach for result diversification. *To appear in the Proceedings of the 18th international conference on World Wide Web, 2009*
- Christoph Aschwanden, Craig Cornelius, Lawrence Burgess, Kevin Montgomery, and Aneesh Sharma. Centralized Data Recording for a Distributed Surgical Skills Trainer to Facilitate Automated Proficiency Evaluation. *Medicine Meets Virtual Reality 15: In Vivo, in Vitro, in Silico: Designing the Next in Medicine, 2007*
- Sudipto Mukherjee Anoop Chawla and Aneesh Sharma. Development of FE Meshes for Folded Airbags. *International Journal of Crashworthiness*, 10(3):259–266, 2005
- Sudipto Mukherjee Anoop Chawla and Aneesh Sharma. Mesh Generation for Folded Airbags. *Computer-Aided Design and Applications*, 1(1-4):269–276, 2004

## SERVICE

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Reviewer for EC, SODA, WWW, WINE, KDD and WSDM.

## INFORMATION TECHNOLOGIES

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### PROGRAMMING AND SCRIPTING

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C C++ Python MATLAB  $\LaTeX$  C# Perl Shell Internet Scripting

### OPERATING SYSTEMS

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Linux UNIX Windows OS X

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<sup>1</sup>Most of these are available for download from my web page.