

Ankan Saha

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Research Interests

- Machine Learning
- Learning Theory
- Computational Geometry

Education

- University of Chicago
PhD candidate, Department of Computer Science
September 2007- present
- Indian Institute of Technology, Kanpur, India
B.Tech in Computer Science and Engineering
August 2003 - May 2007
42nd position in the IIT JEE examination 2003
CGPA: 9.0/10.0 (3.6/4.0)

Work Experience

- **IBM Research Yorktown** (June- September 2010)
Multi-task Learning with new regularization schemes
with Kush Varshney and Aleksandra Mojsilovic
- **MPI Tubingen Germany** (June-September 2008)
Duality between Maximum Likelihood and Maximum Entropy for Multiclass loss functions
with Yasemin Altun
- **Statistical Machine Learning Group, NICTA Australia** (May-July 2007)
Feature Extraction and Training of the CRF loss function for a modular Optimization Solver
with Wray Buntine and S.V.N. Vishwanathan
- **EPFL, Lausanne Switzerland** (May-July 2006)
Developing the mapping function of an efficient universal input device

Publications

- *Lower Bounds on Rate of Convergence of Cutting Plane Methods*
with Xinhua Zhang (University of Alberta) and S.V.N Vishwanathan (Purdue University)
To appear in NIPS 2010
- *New Approximation Algorithms for Minimum Enclosing Convex Shapes*
with S.V.N. Vishwanathan and Xinhua Zhang
To appear in SODA 2011

Preprints

- *Topic Evolution and Emergence in Social Media using dynamic dictionary learning* with Vikas Sindhwani, IBM TJ Watson (Submitted)
- *Newer rates for Bandit Online Convex Optimization* with Ambuj Tewari UT Austin (Submitted)
- *On the Finite time Convergence of Cyclic Coordinate Descent Methods* with Ambuj Tewari, UT Austin (Submitted)

Masters Thesis

- *Algorithms for Semi-Supervised Structured Prediction of Data* with Partha Niyogi, University of Chicago

Academic Honors

- Received Academic Excellence award from IIT Kanpur for the year 2003-2004.
- Sole recipient of the prestigious Aditya Birla Scholarship for "The Leaders of Tomorrow" in the year of 2003 from IIT Kanpur (This award is given to only 10 Science and Engineering Students in India every year.)
- National Talent Search Scholar (NTSE) in the year 2001.
- Secured 2nd rank in Regional Mathematical Olympiad 2002 in the Eastern Region.

Coursework

- **At UChicago:**
Discrete Mathematics, Introduction to AI, Stochastic Processes, Analysis, Machine Learning, Learning theory, Approximation Algorithms, Introduction to Wavelets, Probabilistic approaches to Machine Learning
- **At IIT Kanpur:**
'Data Structures and Algorithms, Theory of Computation, Artificial Intelligence Programming, Knowledge Discovery and Machine Learning, Finite Automata on Infinite Inputs, Real Analysis, BioInformatics.

Technical Skills

- Platforms : MS Windows 9x/Me/2000/NT/XP, Linux(All Distributions)
- Languages : C/C++, Java, ML, LISP, PROLOG, Assembly Language for 80x86 architectures
- Other : AutoCAD, PHP scripting, L^AT_EX, SHELL scripting, PERL

References

- **S.V.N. Vishwanathan** (vishy@stat.purdue.edu)
Assistant Professor in Statistics and Computer Science
Purdue University
- **Vikas Sindhwani** (vikas.sindhwani@gmail.com)
Research Staff Member
IBM Research, Yorktown