Sumeet Katariya **katariya@wisc.edu**

CONTACT INFORMATION
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RESEARCH INTERESTS
Online Learning, Active Learning, Optimization.

EDUCATION

University of Wisconsin-Madison
Ph.D, Electrical Engineering — Aug 2012 - Dec 2016 (expected)
Advisor: Prof. Rob Nowak
GPA: 3.91/4.00

University of Wisconsin-Madison
M.S, Electrical Engineering (Communications/Signal Processing) — Aug 2008 - Dec 2009
Advisors: Prof. Stark Draper, Prof. Ross Barmish
GPA: 3.87/4.00

College of Engineering Pune
B.Tech, Electronics and Telecommunication — Aug 2003 - May 2007
GPA: 8.91/10.00

RELEVANT COURSES AT UW MADISON
Online Learning, Statistical Learning Theory, High Dimensional Inference, Advanced Machine Learning, Theory of Probability, Nonlinear Optimization, Integer Programming, Design and Analysis of Algorithms, Estimation and Decision Theory, Information Theory, Signal Synthesis and Recovery Techniques, Probability and Stochastic Processes, Stochastic Analysis, Linear Systems.

PUBLICATIONS

Conference Papers:

1. Sumeet Katariya, Kevin Jamieson, Atul Deshpande, Rob Nowak: Sparse Dueling Bandits. Accepted for oral presentation at AISTATS 2015.

Journal Papers:

1. Kim, N. S., Draper, S. C., Zhou, S. T., Katariya, S., Ghasemi, H. R., and Park, T. (2012). Analyzing the impact of joint optimization of cell size, redundancy, and ECC on low-voltage SRAM array total area. Very Large Scale Integration (VLSI) Systems, IEEE Transactions on, 20(12), 2333-2337.

PATENTS
Please visit www.cae.wisc.edu/~sumeet/publications.html

PROJECTS

Multi-armed Bandits — May 2014 - present
Design and analysis of active learning algorithms for the multi-armed bandit problem, with emphasis on the dueling bandits framework.

NNMF for Spectroscopy — Jan 2013 - Dec 2013
Modeling of multiply labeled fluorescence images as a constrained NNMF problem and implementation of fast NNMF algorithms.

ECC-Redundancy Tradeoff — Aug 2009 - Dec 2009
Designed simulations to analyze the impact of joint optimization of cell size, redundancy, and ECC on low-voltage SRAM array total area (see publication [**1**]).

E.Coli Monitoring — Aug 2008 - May 2009
Performed bioinformatic analysis of microarray data, setup hardware to monitor E.Coli growth.

Internships

Facebook
SDE Intern, Entities — May 2013 - Aug 2013
- Worked on using social signals to infer location information of people's workplaces.

Google Summer of Code
Software Developer, Scilab — May 2012 - Aug 2012
- Developed a Signal Processing Blockset for Xcos (Scilab's modeling language analogous to Simulink).
- Code can be found at http://forge.scilab.org/index.php/p/dspblock/

Christian Medical College, Vellore
Engineering Intern, Bioengineering — May 2005 - July 2005, May 2006 - July 2006
- Designed an algorithm for SNR assessment of signals during ambulatory EMG recording.
- Designed circuits for prosthetic limbs that mimic touch sensation in humans.

Teaching

University of Wisconsin Madison

Graduate Teaching Assistant, ECE — Jan 2014 - May 2014
Teaching assistant for ECE 203: Introduction to Signals, Information and Computing (98 students).

Graduate Teaching Assistant, CS — Aug 2013 - Dec 2013
Teaching assistant for CS 368: Learning a New Programming Language - Matlab (43 students).

Graduate Teaching Assistant, ECE — Jan 2009 - May 2009
Teaching assistant for ECE 332: Feedback Control Systems. Rating: 4.18/5.00 (23 students)

Work Experience

Oneirix Labs
Research Scientist — May 2007 - July 2008, Jan 2010 - May 2012

- *Modelling and Simulation, Prototype Design*
  - Designed 3D ray-tracing software to determine the angular distribution of light through collimator films. Optimum parameters used in prototype design (see patents **[1]-[3]**).
  - Modelled the transmittivity of a birefringent plate at non-normal angles of incidence. Optimum parameters used in prototype design. (see patents **[1]-[3]**).
- *Teaching:* Conducted short courses on Advanced DSP, Convex Optimization, Linear Dynamical Systems, Information Theory, Probability and Statistics.
- *Miscellaneous:* Patent prosecution, mentoring interns, recruiting candidates.

Programming Skills

Python, C++, Octave (Matlab)

Awards

- Recipient of University of Wisconsin-Madison's Donald and Esther Procknow Fellowship for the year 2012-13.
- Recipient of the Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship from 2004-2007.

References

Available upon request.