

Gowtham Bellala

CONTACT INFORMATION	1666 Cram Circle, Apt #6, Ann Arbor, MI 48105 USA	<i>Cell:</i> (734) 883-5877 <i>E-mail:</i> gowtham@umich.edu <i>WWW:</i> www-personal.umich.edu/~gowtham
RESEARCH INTERESTS	Machine Learning, Statistical Signal Processing, Data Mining and Pattern recognition	
EDUCATION	University of Michigan , Ann Arbor, Michigan USA Ph.D., Electrical Engineering and Computer Science, December 2011 (expected) <ul style="list-style-type: none">• Dissertation Topic: “An Information-Theoretic Approach to Active Diagnosis”• Advisor: Professor Clayton D. Scott M.S., EE: Systems, August 2008, CGPA: 3.97/4.0 Indian Institute of Technology (IIT) , Madras, India B.Tech, Electrical Engineering, May 2006, CGPA: 8.93/10.0	
HONORS AND AWARDS	KLA-Tencor Graduate Fellowship, 2011. NIPS Travel Grant, 2010. Rackham Predoctoral Fellowship, Nominated by the EECS Department, 2010. Graduate Fellowship, EECS Department, University of Michigan, 2008. Inducted in to The Honor Society of Phi Kappa Phi, 2008. Inducted in to The Engineering Honor Society of Tau Beta Pi, 2007. Graduate Fellowship, EECS Department, University of Michigan, 2006-2007. Pratibha Scholarship for academic excellence, Government of India, 2002-2006. Gold medal for securing a nationwide top rank in IIT-JEE, Government of India, 2002. Jeyaraja Rao Memorial Award for Best outgoing student, 1999.	
PROFESSIONAL EXPERIENCE	HP Labs , Palo Alto, US <i>Research Associate Intern</i> May, 2011 - August, 2011 Sustainable Ecosystems Research Group (Hosts: Manish Marwah, Cullen Bash) Developed efficient, scalable algorithms for real-time energy management in large commercial buildings. This work resulted in 2 patent disclosures and a publication. GE Global Research Center , Bangalore, India <i>Research Intern</i> May, 2005 - August, 2005 Studied the existing technologies for artifact removal in MR Imaging. Explored the possibility of using alternative methods over conventional Image processing techniques. Suggested possible new arenas for research in artifact removal.	
ACADEMIC EXPERIENCE	University of Michigan , Ann Arbor, Michigan USA <i>Research Assistant</i> May, 2007 - present <ul style="list-style-type: none">• An Information-Theoretic Approach to Active Diagnosis/Active Learning• Analysis of Symptom Co-occurrence patterns in Cancer Patients• Statistical Error Analysis for False discovery rate (FDR) controlled classification <i>Teaching Assistant</i> September, 2007 - December, 2009 Duties at various times have included weekly discussion lectures, office hours, review sessions before	

exams, grading and preparation of discussion material.

- EECS 545 - Machine Learning, Fall 2009
- EECS 451 - Digital Signal Processing, Winter 2008
- EECS 216 - Signals and Systems, Winter 2007
- EECS 203 - Discrete Mathematics, Fall 2007

SELECTED
PUBLICATIONS

Bellala, G., S.K. Bhavnani, and C. Scott, "Group-based Active Query Selection for rapid diagnosis in time-critical situations," accepted for publication in *IEEE Transactions on Information Theory*, 2011.

Bellala, G., J. Stanley, C. Scott, and S. K. Bhavnani, "Active Diagnosis via AUC Maximization: An Efficient Approach for Multiple Fault Identification in Large Scale, Noisy Networks," to appear at *Uncertainty in Artificial Intelligence (UAI)*, 2011.

Bellala, G., S.K. Bhavnani, and C. Scott, "Active Diagnosis under Persistent Noise with Unknown Noise Distribution: A Rank-Based Approach," in *Proceedings of the Fourteenth International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2011.

Bhavnani, S.K., S. Victor, W.J. Calhoun, W.W. Busse, E. Bleecker, M. Castro, H. Ju, A.R. Brasier and G. Bellala, "How Cytokines Co-occur across Asthma Patients: From Bipartite Network Analysis to a Molecular-Based Classification," submitted to *Journal of Biomedical Informatics*, 2011.

Bellala, G., S.K. Bhavnani, and C. Scott, "Extensions of Generalized Binary Search to Group Identification and Exponential costs," in *Advances in Neural Information Processing Systems 23 (NIPS)*, 154 - 162, 2010.

Bhavnani, S.K., G. Arunkumaar, T. Hall, E. Maslowski, F. Eichinger, S. Martini, P. Saxman, G. Bellala, and M. Kretzler, "Discovering Hidden Relationships between Renal Diseases and Regulated Genes through 3D Network Visualizations," *BMC Research Notes*, 3:296, 2010.

Bhavnani, S.K., G. Bellala, A. Ganesan, R. Krishnan, P. Saxman, C. Scott, M. Silveira, and C. Given, "The Nested Structure of Cancer Symptoms: Implications for Analyzing Co-occurrence and Managing Symptoms," *Methods of Information in Medicine*, 49(6), 581 - 591, 2010.

Scott, C., G. Bellala, and R. Willett, "The false discovery rate for statistical pattern recognition," *Electronic Journal of Statistics*, Vol. 3, 651 - 677, 2009.

Bhavnani, S.K., G. Bellala, A. Ganesan, R. Krishnan, P. Saxman, C. Scott, M. Silveira, and C. Given, "Network Analysis of Cancer Patients and Symptoms: Implications for Symptom Management and Treatment," *Proceedings of American Medical Informatics Association (AMIA)*, 2009.

Scott, C., G. Bellala, and R. Willett, "Generalization error analysis for FDR controlled classification," *Proceedings of IEEE Workshop on Statistical Signal Processing (SSP)*, 792 - 796, Madison, WI, August 2007.

RELEVANT
COURSEWORK

Statistical Machine Learning (**EECS 545**), Estimation, Filtering and Detection (**EECS 564**), Probability and Random Processes (**EECS 501**), Theory of Probability (**STATS 621**), Random Matrix Theory and Applications (**EECS 598**), Mathematical Methods in Signal Processing (**EECS 551**), Fourier Analysis (**MATH 650**), Continuous Optimization Methods (**IOE 511**)

COMPUTER SKILLS

Programming Languages & Packages: C, Matlab, Scilab, Code Composer Studio(basic), VHDL(basic), \LaTeX , Pspice, AutoCAD.

REFERENCES

Available upon request