

Abhisek Kundu

CONTACT INFORMATION	Lally 02, Computer Science, Rensselaer Polytechnic Institute 110 8th Street, Troy, NY 12180, USA	<i>E-mail:</i> abhisekkundu@gmail.com <i>Web:</i> www.cs.rpi.edu/~kundua2
OBJECTIVE	Obtaining full-time position in Machine Learning/Data Mining/Algorithms.	
RESEARCH INTERESTS	My research spans machine learning, compressive sensing, and randomized algorithms in numerical linear algebra. Specifically, I am working on various probabilistic techniques to sample a small number of elements from a matrix to perform tasks such as sparsification (producing a sparse matrix from fully observed data) and reconstruction (recovering the original matrix from partially-observed data). These methods are useful in efficient large-scale data analysis (e.g. social networks analysis, bioinformatics, image processing, text/web mining) and matrix completion (e.g. recommendation systems).	
EDUCATION	Rensselaer Polytechnic Institute , Troy, New York, USA Ph.D., Computer Science, August 2015 <ul style="list-style-type: none">• Dissertation Topic: “Element-wise Matrix Sparsification and Reconstruction”• Advisor: Petros Drineas The Ohio State University , Columbus, Ohio, USA M.S., Computer Science and Engineering, 2012 <ul style="list-style-type: none">• Advisor: Luis Rademacher Jadavpur University , Kolkata, India B.E., Computer Science and Engineering, 2006 <ul style="list-style-type: none">• Advisor: Atal Chaudhuri	
ACADEMIC EXPERIENCE	Rensselaer Polytechnic Institute , Troy, New York USA <i>Graduate Research Assistant</i> , Computer Science Department January 2013 - present Working on various projects on randomized algorithms in numerical linear algebra, optimization, and machine learning. <i>Graduate Teaching Assistant</i> , Computer Science Department August - December, 2012 Grading Machine Learning course. The Ohio State University , Columbus, Ohio USA <i>Graduate Research Assistant</i> January - March, 2012 Worked on randomized algorithms for column subset selection problem. <i>Instructor/Graduate Teaching Assistant</i> March - May, September - December, 2011 Taught undergraduate course on Programming and Algorithms in Computer Science and Engineering Department. Responsibilities included lectures, preparing homework, lab assignments, and examination questions, grading, and proctoring. <ul style="list-style-type: none">• CSE202 Introduction to Programming and Algorithms for Engineers and Scientists, Spring and Autumn 2011. <i>Graduate Research Assistant</i> January 2009 - March, 2011 Worked on various projects on gene expression data analysis and genetic network analysis.	

- PUBLICATIONS AND WORKING PAPERS
- **A. Kundu** *Relaxed Leverage Sampling for Low-rank Matrix Completion*. <http://arxiv.org/pdf/1503.06379.pdf>, 2015.
 - **A. Kundu**, P. Drineas, M. Magdon-Ismail. *Approximating Sparse PCA from Incomplete Data*. <http://arxiv.org/pdf/1503.03903.pdf>, 2015.
 - **A. Kundu**, P. Drineas, M. Magdon-Ismail. *Recovering PCA from Hybrid- (ℓ_1, ℓ_2) Sparse Sampling of Data Elements*. <http://arxiv.org/pdf/1503.00547.pdf>, 2015.
 - **A. Kundu**, P. Drineas. *Identifying Influential Entries in a Matrix*. 2015 (working).
 - **A. Kundu**, P. Drineas, M. Magdon-Ismail. *CUR-based Element-wise Matrix Reconstruction*. 2015 (working).
 - **A. Kundu**, P. Drineas. *A Note on Randomized Element-wise Matrix Sparsification*. <http://arxiv.org/pdf/1404.0320v1.pdf>, 2014.
 - P. Payne, K. Huang, K. Keen-Circle, **A. Kundu**, J. Zhang, T. Borlawsky. *Multi-dimensional Discovery of Biomarker and Phenotype Complexes*. BMC Bioinformatics 2010, 11(Suppl 9):S3
 - **A. Kundu**, H.G. Ozer, T. Borlawsky, K. Keen-Circle, K. Huang, P. Payne. *Clinical Attribute Network for Chronic Lymphocytic Leukemia*. IEEE BIBM 2009, (279 - 282).
 - B. B. Chaudhuri, **A. Kundu**. *Synthesis of Individual Handwriting in Bangla Script*. International Conference on Frontiers in Handwriting Recognition, 2008.
 - **A. Kundu**, A. Chaudhuri, D. Ghosh, S. Bhattacharyya, A. Chaudhuri. *Watermarking in JPEG2000 Coding Pipeline Using Quantization Index Modulation*. International Conference on Information Technology, Vol-I, 144-150, ISSN 0973-6824, 2007.

PROFESSIONAL EXPERIENCE

George Edcare, Kolkata, India

Part-time Faculty

January - July, 2008

Worked as faculty in Mathematics at George Edcare in Kolkata, India. Duties included teaching, grading, and designing course materials for GRE and GMAT aspirants.

Amdocs Product and Development Organization, Pune, India

Subject Matter Expert

July 2006 - June 2007

Worked as an expert in Software Development at Amdocs Product and Development Organization in India. Duties focused on incorporating customization on existing softwares, and developing new software products.

- Member of a team receiving special recognition from the CEO for the release of a new product, 2007.

COMPUTER SKILLS

- Coding: Matlab, Java, C, C++, Unix shell scripts, HTML, JavaScript, CSS.
- Operating Systems: Unix/Linux, Windows.
- Typography: Latex.