

Christos Boutsidis

Contact Information	Work address Computer Science Department Rensselaer Polytechnic Institute 110 8-th Street Troy, NY 12180-3590, USA	Office room: Amos Eaton 112 Office phone: +1 (518) 276-3080 Mobile: +1 (518) 276-3080 E-mail: boutsc@cs.rpi.edu Web: www.cs.rpi.edu/~boutscl/
Personal Information	First Name: Christos Last Name: Boutsidis Date of Birth: August 9, 1983	Nationality: Greek Citizenship: Greek US Visa: Student
Education	Rensselaer Polytechnic Institute Ph.D. Student in Computer Science Advisor: Petros Drineas	Aug 2006 - present
	University of Patras, GREECE BS in Computer Science and Engineering Thesis Advisor: Efstratios Gallopoulos	2001 - 2006
Research Overview	Theory and applications are the two complementary aspects of my research. I believe that theoretical research should be driven by applications and applied research should be guided by theory. On the theory side, my focus is on (randomized and/or approximation) matrix algorithms and numerical linear algebra, while, from an applications point of view, I employ matrix algorithms and tools to solve data analysis and machine learning problems.	
Professional Experience	Research Assistant Computer Science Department Rensselaer Polytechnic Institute	Aug 2006 - present
	Research Intern Service Engineering Department IBM T.J. Watson Research Center	May 2008 - Aug 2008
	Research Fellow Institute for Pure and Applied Mathematics (IPAM) University of California, Los Angeles (UCLA)	Sep 2008 - Dec 2008
	Research Intern Mathematical and Computational Sciences Department IBM Zurich Research Laboratory	May 2009 - Oct 2009
Publications (Journals)	An Improved Approximation Algorithm for the Column Subset Selection Problem C. Boutsidis, M.W. Mahoney, and P. Drineas Under review, Technical Report arXiv:0812.4293v1, 2008.	
	Random Projections for the Nonnegative Least Squares Problem C. Boutsidis and P. Drineas Linear Algebra and its Applications, Volume 431, Issues 5-7, 1 August 2009, pages 760-771.	
	SVD-based initialization: A head start on nonnegative matrix factorization C. Boutsidis and E. Gallopoulos Pattern Recognition, Volume 41, Issue 4, April 2008, pages 1350-1362.	

- Publications
(Conferences)**
- Unsupervised Feature Selection for the k -means Clustering Problem**
C. Boutsidis, M.W. Mahoney, and P. Drineas
Twenty-Third Annual Conference on Neural Information Processing Systems (NIPS)
Vancouver, B.C., Canada, December 7-10, 2009
- An Improved Approximation Algorithm for the Column Subset Selection Problem**
C. Boutsidis, M.W. Mahoney, and P. Drineas
ACM-SIAM Symposium on Discrete Algorithms (SODA)
New York, New York, USA, January 4-6, 2009
- Unsupervised Feature Selection for Principal Components Analysis**
C. Boutsidis, M.W. Mahoney, and P. Drineas
ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)
Las Vegas, Nevada, USA, August 24-27, 2008
- Clustered Subset Selection and its Applications on IT Service Metrics**
C. Boutsidis, J. Sun, and N. Anerousis
ACM Conference on Information and Knowledge Management (CIKM)
Napa Valley, California, USA, October 26-30, 2008
- Presentations
(Public Talks)**
- A spectral approach to co-clustering customer-product interaction data**
- Oct 2009: IBM Zurich Research Laboratory, Zurich, Switzerland.
- Unsupervised Feature Selection for the K-means Clustering Problem**
- Sep 2009: GAMM Workshop Applied and Numerical Lin. Algebra, ETH Zurich, Switzerland.
- An Improved Approximation Algorithm for the Column Subset Selection Problem**
- Jan 2009: ACM-SIAM Symposium on Discrete Algorithms, New York, NY.
- Sep 2008: Institute of Pure and Applied Mathematics (IPAM), UCLA, CA (poster).
- Jun 2008: Workshop on Algorithms for Modern Massive Datasets, Stanford, CA (poster).
- May 2008: SIAM Conference on Optimization, Boston, MA (poster).
- Feb 2008: Theory Seminar, Computer Science Department, RPI, Troy, NY.
- Apr 2007: 4th Montreal Scientific Computing Days, Centre de Recherches Mathematiques, Universite de Montreal, Montreal, Canada.
- Clustered Subset Selection and its Applications on IT Service Metrics**
- Nov 2008: Institute of Pure and Applied Mathematics (IPAM), UCLA, CA.
- Oct 2008: ACM Conference on Information and Knowledge Management, Napa Valley, CA.
- Aug 2008: IBM T.J. Watson Research Lab, Hawthorne, NY.
- Effective initializations for NMF algorithms**
- May 2008: SIAM Conference on Optimization, Boston, MA.
- Patents**
- Method and Apparatus for Automatic Summary and Insight on Data Matrices**
with J. Sun and N. Anerousis (IBM internal YOR8-2008-0836)
- Method for clustering numerical data with extra categorical information**
with J. Sun and N. Anerousis (IBM internal YOR8-2008-0921)
- Matrix Reordering and Visu/tion Techniques in the Presence of Data Hierarchies**
with M. Vlachos and A. Labbi (IBM internal CH8-2009-0065)
- Honors/Awards**
- 2009:** Gerondelis Foundation Fellowship, 2009.
- 2009:** IBM Travel award. ACM-SIAM Symposium on Discrete Algorithms.
New York, NY, January 4-6, 2009.
- 2008:** Travel award. 2nd Western Conference in Mathematical Finance.

University of Texas at Austin, Austin, Texas, October 31 - November, 2008.

2007: Travel award. Institute for Pure and Applied Mathematics (IPAM), University of California Los Angeles (UCLA), to participate in the program “Mathematics of Knowledge and Search Engines: Tutorials”, September 11 - 20, 2007.

2007: Travel award. IPAM (Institute for Pure and Applied Mathematics), University of California Los Angeles (UCLA), to attend “Short Course on Sparse Representations and High Dimensional Geometry”, May 30 - June 1, 2007

2006: Research Fellowship. Computer Science Department, University of Toronto, Fall 2006 (declined).

**Teaching
Experience**

Fall 2007: Teaching Assistant, Computability and Complexity (CSCI-6050/4050)
Computer Science Department, Rensselaer Polytechnic Institute
Instructor: Prof. Mark Goldberg
Duties: Teaching (occasionally), proctoring exams, grading, holding office hours

Spring 2008: Teaching Assistant, Models of Computation (CSCI 2400)
Computer Science Department, Rensselaer Polytechnic Institute
Instructor: Prof. Petros Drineas
Duties: Proctoring exams, grading, holding office hours

**Society
Membership**

Computer Science Department, Rensselaer Polytechnic Institute
- Colloquium Committee (2006-2007)
- Graduate Admissions Committee (2008-2009)

SIAM, member since 2006
- SIAM Activity Group on Linear Algebra, member since 2006
- SIAM Activity Group on Optimization, member since 2008

ACM, member since 2008
- Rensselaer ACM Student Chapter, member since 2007

Society Service

Reviewer (journals):

- IEEE Transactions on Knowledge and Data Engineering
- IEEE Signal Processing Letters
- Journal of Computational and Applied Mathematics
- Computational Intelligence and Neuroscience

Reviewer (conferences):

- ACM-SIAM Symposium on Discrete Algorithms (SODA): 2010.
- ACM Symposium on Theory of Computing (STOC) : 2009.

External Reviewer (conferences):

- ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD): 2006, 2007, 2009.
- SIAM Conference on Data Mining (SDM): 2008.

References

Available upon request.

Last update on: October 31st, 2009.