

# Kui Tang

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EDUCATION	<b>Columbia University</b> , New York, NY	
	Ph.D., Computer Science	<b>2014 – present</b>
	<ul style="list-style-type: none"><li>• <i>On a leave of absence through 2017.</i></li><li>• Advisors: David Blei and Tony Jebara.</li></ul>	
	M.S., Computer Science	<b>2017</b>
	B.S., Applied Mathematics	<b>2014</b>
EXPERIENCE	<b>Microsoft Research New England</b> , Cambridge, MA	
	Research Intern	<b>2016</b>
	<ul style="list-style-type: none"><li>• Researched vector embedding and matrix-factorization methods to model consumer demand.</li><li>• Developed scalable inference algorithms and prepare manuscript for peer-reviewed publication.</li></ul>	
	<b>Palantir Technologies, Inc.</b> , New York, NY	
	Software Engineering Intern — Machine Learning	<b>2015</b>
	<ul style="list-style-type: none"><li>• Developed and evaluated an hourly Bayesian hierarchical regression model of consumer demand.</li><li>• Parallelized and improved performance of production models, quadrupling training throughput.</li><li>• Presented methodology and results to business stakeholders.</li></ul>	
	<b>Hunch, Inc.</b> , New York, NY	
	Machine Learning Intern	<b>2011</b>
	<ul style="list-style-type: none"><li>• Developed a privacy-respecting advertising tool based on learned user preferences.</li><li>• Implemented and evaluated collaborative filtering algorithms from the literature.</li></ul>	
AWARDS & FELLOWSHIPS	Columbia University Presidential Fellowship (4 years full funding)	<b>2014 – present</b>
	National Science Foundation Graduate Research Fellowship (3 years funding)	<b>2014 – present</b>
	National Defense Science and Engineering Fellowship (declined)	<b>2014</b>
	Columbia University Egleston Research Fellowship	<b>2010 – 2014</b>
	Runner-Up, Computing Research Association Outstanding Undergraduate Researcher	<b>2014</b>
PROGRAMMING	Proficient in Python (incl. NumPy, SciPy, Pandas, matplotlib, Cython, C API), C, C++ (incl. Boost, Eigen, templates) Matlab (incl. Mex), Shell. Familiar with R, Java, SQL.	
PUBLICATIONS	<ol style="list-style-type: none"><li>[1] <b>K. Tang</b>, N. Ruoizzi, D. Belanger, T. Jebara. <a href="#">Bethe Learning of Graphical Models via MAP Decoding</a>. <i>Artificial Intelligence and Statistics (AISTATS)</i>. 2016. Accept rate: 28%.</li><li>[2] A. Weller, <b>K. Tang</b>, D. Sontag, T. Jebara. <a href="#">Approximating the Bethe Partition Function</a>. <i>Uncertainty in Artificial Intelligence (UAI)</i>. 2014. Accept rate: 32%.</li><li>[3] M. Kambadur, <b>K. Tang</b>, M. Kim. <a href="#">ParaShares: Finding the Important Basic Blocks in Multi-threaded Programs</a>. <i>Euro-Par</i>. 2014.</li><li>[4] K. Choromanski, T. Jebara, <b>K. Tang</b>. <a href="#">Adaptive Anonymity via b-Matching</a>. <i>Neural Information Processing Systems (NIPS)</i>. 2013. <b>Spotlight</b> accept rate: <b>3.7%</b>.</li><li>[5] M. Kambadur, <b>K. Tang</b>, J. Lopez, and M. Kim. <a href="#">Parallel Scaling Properties from a Basic Block View</a>. <i>International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS)</i> (Poster). 2013.</li><li>[6] M. Kambadur, <b>K. Tang</b>, and M. Kim. <a href="#">Collection, Analysis, and Uses of Parallel Block Vectors</a>. <i>IEEE Micro</i> 33(3):86-94 (2013). <b>Top pick</b> accept rate: <b>14%</b>.</li><li>[7] M. Kambadur, <b>K. Tang</b>, and M. Kim. <a href="#">Harmony: Collection and Analysis of Parallel Block Vectors</a>. <i>International Symposium for Computer Architecture (ISCA)</i> 20.1. Accept rate: 18%.</li></ol>	

WORKSHOPS AND POSTERS	<ul style="list-style-type: none"> <li>[1] <b>K. Tang</b>, D. Blei. Word Vectors via Bayesian Matrix Factorization. New York Academy of Sciences Machine Learning Symposium. 2016.</li> <li>[2] <b>K. Tang</b>, A. Weller, T. Jebara. <a href="#">Network Ranking with Bethe Pseudomarginals</a>. <i>NIPS Workshop on Discrete Optimization in Machine Learning</i>. 2013.</li> </ul>	
INVITED TALKS	<ul style="list-style-type: none"> <li>[1] <a href="#">Bethe Learning of Graphical Models via MAP Decoding</a>. Machine Learning Seminar. Cambridge University Engineering Department. Cambridge, UK. May 2016.</li> <li>[2] Introduction to Variational Inference. Machine Learning Interest Seminar. Palantir Technologies, New York. Jul. 2015.</li> <li>[3] <a href="#">Adaptive Anonymity via b-Matching</a>. Machine Learning and Friends Lunch. UMass Amherst, Feb. 2014.</li> <li>[4] <a href="#">Statistical Machine Learning with Bayesian Networks</a>. Tutorial. Columbia Data Science Society. Columbia University, Nov. 2013.</li> <li>[5] <a href="#">Statistical Machine Learning with Bayesian Networks</a>. Tutorial. hackNY Masters. New York University, Sept. 2013.</li> </ul>	
TEACHING	<p><b>Computer Science Dept.</b>, Columbia University, New York, NY</p> <p>Teaching Assistant <span style="float: right;"><b>2014–2015</b></span></p> <ul style="list-style-type: none"> <li>• Advanced Machine Learning (COMS 4772; Grad; Spring 2015)</li> <li>• Foundations of Graphical Models (STAT/COMS 6509; Grad; Fall 2014)</li> </ul> <p><b>Emerging Scholars Program</b>, Columbia University, New York, NY</p> <p>Graduate Coordinator <span style="float: right;"><b>2015–2016</b></span></p> <ul style="list-style-type: none"> <li>• Manage introductory computer science seminar course with 4 sections.</li> <li>• Developed new course materials on machine learning.</li> <li>• Advise 4 senior undergraduates on teaching.</li> </ul>	
SERVICE	<p><b>Workflow Chair</b>, International Conference on Machine Learning (ICML) <span style="float: right;"><b>2013 – 2014</b></span></p> <p><b>Reviewer</b>, ICML 2017, NIPS 2014, 2015, 2017, JMLR (Jun. 2014)</p> <p><b>Student Volunteer</b>, NIPS 2013, ICML 2014</p> <p><b>Co-organizer</b>, Columbia Machine Learning Reading Group <span style="float: right;"><b>2012 – 2014</b></span></p>	
OPEN SOURCE	<ul style="list-style-type: none"> <li>• <a href="#">MexCpp</a>: Object-oriented C++ interface for writing MATLAB extensions (MEX) without tears.</li> <li>• <a href="#">Bethe Learning of Graphical Models via MAP Decoding</a>.</li> <li>• <a href="#">Polynomial-time inference of Bethe partition function and marginals</a>.</li> <li>• <a href="#">Adaptive Anonymity via b-Matching</a>.</li> <li>• <a href="#">Harmony</a>: Efficiently collect parallel block vectors (profiles) for multithreaded problems.</li> </ul>	
LANGUAGES	French: Conversational; Mandarin Chinese: Bilingual speaking.	

Last updated 17 Apr 2017.