# Shusen Wang (王树森)

PhD Candidate
College of Computer Science & Technology
Zhejiang University
Hangzhou, Zhejiang 310027, China

Room 304, East CaoGuangBiao Building
Zhejiang University, #38 Zheda Road
Hangzhou, Zhejiang 310027, China
E-mail: wss@zju.edu.cn
Phone: (86)13732242072
Homepage: wangshusen.github.io

## Education

- **PhD**, in 2016 (expected)
  College of Computer Science and Technology, Zhejiang University, China.
  Advisor: Prof. Zhihua Zhang
- **Bachelor of Engineering**, in 07/2011
  Zhejiang University, China.

## Work Experience

- 05/2014—now: Research intern, with Professor Tong Zhang.
  Baidu Big Data Lab, Beijing, China.
- 02/2012—08/2012: Research intern, Google Research, Beijing, China.
- 08/2011—02/2012: Intern, with Dr. Haixun Wang and Dr. Yangqiu Song.
  Microsoft Research Asia (MSRA), Beijing, China.

## Research interests

- Machine learning
- Randomized numerical linear algebra

## Honors & Awards

- 2014 Baidu Scholarship, award to 8 Chinese students around the world
- 2013 Microsoft Research Asia Fellow, 10 winners out of over 100 candidates from 45 leading academic institutions in East Asia.
- 2012, 2013, 2014 National Scholarship for Graduate Students, three times.
- 2012 Scholarship Award for Excellent Doctoral Student Granted by Ministry of Education, 25 winners from all majors in Zhejiang University.
- 2011 Excellent Bachelor Thesis in Zhejiang University (100 from 5,000 students in all majors)

## Academic Service

- Reviewer of NIPS 2014, 2015, IJCAI 2015, JMLR

## Selected Work

- Improving CUR Matrix Decomposition and Nyström Approximation via Adaptive Sampling.
  **Shusen Wang** and Zhihua Zhang.
  *Journal of Machine Learning Research*, 14: 2729-2769, 2013. (JMLR 2013).
- EP-GIG Priors and Applications in Bayesian Sparse Learning.
  Zhihua Zhang, **Shusen Wang**, Dehua Liu, and Michael I. Jordan.
  *Journal of Machine Learning Research*, 13: 2031-2061, 2012. (JMLR 2012).
- SPSD Matrix Approximation vis Column Selection: Theories, Algorithms, and Extensions.
  **Shusen Wang**, Luo Luo, and Zhihua Zhang.
  *arXiv:1406.5675*, 2014.

◇ Towards More Efficient Symmetric Matrix Sketching and the CUR Matrix Decomposition.
**Shusen Wang**, Zhihua Zhang, and Tong Zhang.
*arXiv:1503.08395*, 2015.

◇ Improved Analyses of the Randomized Power Method and Block Lanczos Method.
**Shusen Wang**, Zhihua Zhang, and Tong Zhang.
*arXiv:1508.06429*, 2015.

CONFERENCE PAPERS

◇ Open Domain Short Text Conceptualization: A Generative + Descriptive Modeling Approach.
Yangqiu Song, **Shusen Wang**, and Haixun Wang.
In *the International Joint Conference on Artificial Intelligence*, 2015. (IJCAI 2015).

◇ Improving the Modified Nyström Method Using Spectral Shifting.
**Shusen Wang**, Chao Zhang, Hui Qian, and Zhihua Zhang.
In *Proceedings of the 20th ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, 2014. (KDD 2014).

◇ Efficient Algorithms and Error Analysis for the Modified Nyström Method.
**Shusen Wang** and Zhihua Zhang.
In *Proceedings of the 17th International Conference on Artificial Intelligence and Statistics*, JMLR W&CP, 2014. (AISTATS 2014).

◇ Making Fisher Discriminant Analysis Scalable.
Bojun Tu, Zhihua Zhang, **Shusen Wang**, and Hui Qian.
In *the International Conference on Machine Learning*, 2014. (ICML 2014).

◇ Exact Subspace Clustering in Linear Time.
**Shusen Wang**, Bojun Tu, Congfu Xu, and Zhihua Zhang.
In *the 28th AAAI Conference on Artificial Intelligence*, 2014. (AAAI 2014).

◇ Using The Matrix Ridge Approximation to Speedup Determinantal Point Processes Sampling Algorithms.
**Shusen Wang**, Chao Zhang, Hui Qian, and Zhihua Zhang.
In *the 28th AAAI Conference on Artificial Intelligence*, 2014. (AAAI 2014).

◇ Transfer Understanding from Head Queries to Tail Queries.
Yangqiu Song, Haixun Wang, Weizhu Chen, and **Shusen Wang**.
In *ACM International Conference on Information and Knowledge Management*, 2014. (CIKM 2014).

◇ Nonconvex Relaxation Approaches to Robust Matrix Recovery.
**Shusen Wang**, Dehua Liu, and Zhihua Zhang.
In *the International Joint Conference on Artificial Intelligence*, 2013. (IJCAI 2013).

◇ A Scalable CUR Matrix Decomposition Algorithm: Lower Time Complexity and Tighter Bound.
**Shusen Wang** and Zhihua Zhang.
In *Advances in Neural Information Processing Systems 25* , 2012. (NIPS 2012).

◇ Colorization by Matrix Completion.
**Shusen Wang** and Zhihua Zhang.
In *the 26th AAAI Conference on Artificial Intelligence*, 2012. (AAAI 2012).

◇ Efficient Subspace Segmentation via Quadratic Programming.
**Shusen Wang** and Xiaotong Yuan, Tiansheng Yao, Shuicheng Yan, Jialie Shen.
In *the 25th AAAI Conference on Artificial Intelligence*, 2011. (AAAI 2011).