





# Dejiao ZHANG

WEBSITE:  LINKEDIN:  GOOGLE SCHOLAR:  GITHUB:   
PHONE: +1 7346040566 EMAIL: [dejiaozhang@gmail.com](mailto:dejiaozhang@gmail.com)  
ADDRESS: 25 Park Lane South, Jersey City, New Jersey.

## RESEARCH INTERESTS

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Meeting Summarization, Unsupervised Domain Adaptation, Neural Network Compression, Information Theory in Neural Networks, and Non-convex Optimization.

## EDUCATION

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<b>University of Michigan</b> Ph.D. Electrical Engineering and Computer Science Major: Signal Processing   Minor: Statistics Thesis: Extracting Compact Knowledge From Massive Data	Ann Arbor, USA 09/2013 – 04/2019 Advisor: Prof. Laura Balzano
<b>Nanjing University of Information Science and Technology</b> B.S. Information Engineering	Nanjing, China 09/2009 – 06/2013

## WORK EXPERIENCE

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08/2019 PRESENT	Applied Scientist II <i>Amazon Web Services, New York</i> Projects: Meeting Summarization, Theme Detection in Dyadic Conversations
06/2017 08/2017	Data Science PhD Intern at Technicolor AI Lab, <i>Los Altos, CA</i> Mentor: Brian Eriksson & Yifan Sun Project: Deep Unsupervised Clustering with Mixture of Autoencoders.

## TEACHING EXPERIENCE

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09/2018 12/2018	Graduate Student Instructor of EECS 598 (Reinforcement Learning) <i>University of Michigan, Ann Arbor</i> One of the two instructors teaching the discussion session of this course.
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## PUBLICATIONS

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Submitted papers

- 1 **Zhang, D.**, Nallapati, R., Zhu, H., Nan, F., Nogueira dos Santos, C., McKeown, K. & Xiang, B. (2020). *Unsupervised domain adaptation for cross-lingual text labeling*. Submitted to EMNLP 2020.
- 2 Nan, F., Nallapati, R., Wang, Z., Nogueira dos Santos, C., Zhu, H., **Zhang, D.**, ... Xiang, B. (2020). *Unsupervised domain adaptation for cross-lingual text labeling*. Submitted to EMNLP 2020.

## Journal

- 1 **Zhang, D.** & Balzano, L. (2018). Convergence of a grassmannian gradient descent algorithm for subspace estimation from undersampled data. *Submitted to the Journal of the Society for the Foundations of Computational Mathematics (FOCM)*. [link](#).

- 2 He, J., **Zhang, D.**, Balzano, L. & Tao, T. (2014). Iterative grassmannian optimization for robust image alignment. *Image and Vision Computing*, 32(10), 800–813. [link](#).

## Conference

- 1 **Zhang, D.**, Zhao, T. & Balzano, L. (2018). Information maximization auto-encoding. Accepted to the Workshop on Bayesian Deep Learning, NeurIPS 2018, [link](#).
- 2 Zhao, T., **Zhang, D.**, Sun, Z. & Honglak, L. (2018). Information regularized neural networks. Accepted to the Workshop on Integration of Deep Learning Theories, NeurIPS 2018, [link](#).
- 3 **Zhang, D.**, Wang, H., Figueiredo, M. & Balzano, L. (2018). Learning to share: Simultaneous parameter tying and sparsification in deep learning. In *Proceedings of the 6th International Conference on Learning Representations (ICLR 2018)*. [link](#)  
Awarded ICLR student travel grant.
- 4 Ongie, G., Hong, D., **Zhang, D.** & Balzano, L. (2018). Online estimation of coherent subspaces with adaptive sampling. In *2018 IEEE Statistical Signal Processing Workshop (SSP)*. [link](#).
- 5 **Zhang, D.**, Katz-Samuels, J., Figueiredo, M. A. & Balzano, L. (2018). Simultaneous sparsity and parameter tying for deep learning using ordered weighted L1 regularization. In *Proceedings of the IEEE Statistical Signal Processing Workshop (SSP, 2018)*. [link](#).
- 6 **Zhang, D.** & Balzano, L. (2017). Matched subspace detection using compressively sampled data. In *2017 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. [link](#).
- 7 **Zhang, D.** & Balzano, L. (2016). Global convergence of a grassmannian gradient descent algorithm for subspace estimation. In *Proceedings of The 19th International Conference on Artificial Intelligence and Statistics (AISTATS)*. [link](#).
- 8 He, J., **Zhang, D.**, Balzano, L. & Tao, T. (2013). Iterative online subspace learning for robust image alignment. In *Proceedings of The 10th IEEE International Conference and Workshops on Automatic Face and Gesture Recognition (FG)*. [link](#).

## Technical Report

- 1 **Zhang, D.**, Sun, Y., Eriksson, B. & Balzano, L. (2017). *Deep unsupervised clustering with mixture of autoencoders*. UMich Deep Blue Technical Report. [link](#).

## PROFESSIONAL REVIEWING ACTIVITIES

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### Journal

IEEE Transactions on Information Theory (T-IT)  
IEEE Transactions on Signal Processing (TSP)  
IEEE Transactions on Sensor

### Conference

COLT 2017, ICML 2019

## SKILLS

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Languages: Python (preferred), CUDA, C/C++, Latex  
Tools: TensorFlow, PyTorch, Theano, Keras, Matlab