

# Yang Song

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## EDUCATION

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- **University of Tennessee, Knoxville** Knoxville, TN, USA  
*Ph.D. candidate in Computer Engineering;* Aug. 2013 – Present
- **Zhejiang University** Hangzhou, Zhejiang, China  
*Master in Electrical Engineering* Sep. 2010 - Apr. 2012
- **Northeastern University** Shenyang, Liaoning, China  
*Bachelor in Electrical Engineering* Sep. 2006 - Jul. 2010

## EXPERIENCE

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- **Samsung Research America** Mountain View, CA  
*Research Intern* Oct. 2017- Dec. 2017
  - **Face Editing:** Automatic face editing and morphing through conditional generative adversarial nets
  - **Face Animation:** Face and lip synthesis from audio
- **Megvii (Face++) US** Seattle, WA  
*Research Intern* Jun. 2017- Sep. 2017
  - **Cross-Age Face Annotation:** Image collection, cleaning and annotation through metric learning
- **University of Tennessee, Knoxville** Knoxville, TN  
*Research Assistant* Aug. 2013 - Present
  - **Face Progression/Regression:** Face generation with aging effect
  - **Image In-painting and Transformation:** Face to sketch image transformation
  - **Event Detection and Recognition:** Multiple events detection, recognition and localization in large-scale power system using sparse coding
  - **Image Classification:** Sparse coding based image classification
  - **IR image Unmixing:** Material heat source depth estimation through image unmixing

## RESEARCH INTEREST

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- Signal Processing, Computer Vision and Machine Learning
  - *Sparse Coding and Dictionary Learning*
  - *Image Classification, Image Generation, Transformation and Morphing*
  - *Deep Learning, Generative Models*

## TECHNICAL SKILL

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- Python, C/C++, Matlab, TensorFlow.

## PUBLICATIONS

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**Y. Song**, Z. Zhang, and H. Qi. “r-BTN: Cross domain Face Composition and Synthesis from Limited Facial Parts.” *AAAI Conference on Artificial Intelligence*, 2018.

Z. Zhang, **Y. Song**, and H. Qi. “Decoupled Learning for Conditional Adversarial Networks.” *IEEE Winter Conf. on Applications of Computer Vision (WACV)*, 2018.

Z. Zhang, **Y. Song**, and H. Qi. “Stabilizing the Conditional Adversarial Network by Decoupled Learning.” *ICML Workshop on Implicit Models*, 2017.

Z. Zhang, **Y. Song**, and H. Qi. “Generative Adversarial Networks Powered by Autoencoding-A Theoretic Reasoning.” *ICML Workshop on Implicit Models*, 2017.

A. Rahimpour, L. Liu, A. Taalimi, **Y. Song** and H. Qi “Person Re-identification Using Visual Attention.” *IEEE International Conference on Image processing (ICIP)*, 2017.

- Y. Song**, Z. Zhang, and H. Qi. “Recursive Cross-Domain Face/Sketch Generation from Limited Facial Parts.” *ICML Workshop on Implicit Models*, 2017.
- Y. Song**, Z. Zhang, and H. Qi. “Age Progression/Regression by Conditional Adversarial Autoencoder.” *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017. (**Spotlight**)
- Y. Song**, X. Xie, J. Luo, P.K. Liaw, H. Qi, and Y. Gao. “Seeing the Unseen: Uncover the Bulk Heterogeneous Deformation Processes in Metallic Glasses through Surface Temperature Decoding”, *Materials Today*, 2017.
- Y. Song**, W. Wang, Z. Zhang, Y. Liu, and H. Qi. “Multiple Event Detection and Recognition for Large-scale Power Systems through Cluster-based Sparse Coding.” *IEEE Transactions on Power Systems (TPS)*, 2017.
- Z. Zhang, **Y. Song**, H. Cui, J. Wu, F. Schwartz, and H. Qi. “Topological Analysis and Gaussian Decision Tree: Effective Representation and Classification of Biosignals of Small Sample Size.” *IEEE Transactions on Biomedical Engineering*, 2016.
- Z. Zhang, **Y. Song**, W. Wang, and H. Qi. “Derivative Delay Embedding: Online Modeling of Streaming Time Series.” *International Conference on Information and Knowledge Management (CIKM)*, 2016. (**Oral**)
- Y. Song**, Z. Zhang, A. Rahimpour, L. Liu, and H. Qi. “Dictionary Reduction: Beyond Compact Dictionary Learning for Classification.” *Asian Conference on Computer Vision (ACCV)*, 2016.
- Z. Zhang, **Y. Song**, H. Cui, J. Wu, F. Schwartz, and H. Qi. “Early Mastitis Diagnosis through Topological Analysis of Biosignals from Low-Voltage Alternate Current Electrokinetics.” *37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, 2015.
- Y. Song**, W. Wang, Z. Zhang, Y. Liu, and H. Qi. “Multiple Event Analysis for Large-scale Power Systems Through Cluster-based Sparse Coding.” *IEEE International Conference on Smart Grid Communications*, 2015.