

Yang ZHANG

Email: zhangyangbill@gmail.com

Personal Webpage: <https://zhangyangbill.github.io/My-webpage/>

Mailing Address:
1003 W Stoughton St, Apt 5
Urbana, Illinois 60801

EDUCATION

- **University of Illinois at Urbana-Champaign** Urbana, IL
Ph.Ds. in Electrical and Computer Engineering
09/2012-
06/2017(Expected)
 - Cumulative GPA: 4.0 (All major courses graded A+)
 - Major Courses include: DSP II, Random Processes, Vector space signal processing, Optimization
- **Tsinghua University** Beijing, China
B.S. in Electronic Engineering; Minor Degree: Economics
09/2008-06/2012
 - GPA for EE: 91/100
 - GPA for Economics: 92.5/100
- **The University of Hong Kong** Hong Kong
Exchange student majoring in EComE; attended courses of economics
09/2010-12/2010
 - GPA: 3.97/4.0

RESEARCH INTERESTS

- **Generative Models on Speech**
 - How a strong model of speech (probabilistic, signal-processing-based, or deep generative models) could improve the performance of speech enhancement & manipulation
 - Proposed PAT model (Probabilistic Acoustic Tube)
- **Streaming Data Mining with Probabilistic Generative Models**
 - Efficient Streaming data mining tasks (recommendation, link prediction, community detection) using probabilistic generative models with temporal evolution

INDUSTRY EXPERIENCE

- **Microsoft Research** 05/2016-08/2016
Internship on: Model-based Beamforming with Heterogeneous Ad-hoc Microphone Arrays
 - Locate & retain speech energy instead of position & interference calibration
 - Apply a strong speech model on glottal residual signal
- **Adobe Creative Technology Lab** 06/2015-present
Internship & Collaboration on: Prosody Modeling and Modification using Generative Models
 - Prosody Models Combining RNN and PENTA
 - Modify speech using the predicted prosody change
- **Army Research Lab** 06/2014-06/2015
Internship on: Transient Acoustic Signal Classification
 - Develop a dictionary-based classification scheme for transient acoustic signal under noisy environment.
- **Logo's Care Inc. Ltd.** 11/2014-present
Consulting on: Automatic Heartrate Tracking Under Negative SNR
 - Track heart rate from data collected wearable ultra-acoustic sensors. The data are corrupted by high noise level induced by running and walking of the subject. The SNR is as low as -20dB.
- **Yahoo! Labs** 11/2014-present
Collaboration on Streaming Recommendation System
 - Gaussian process models temporal evolution of hidden preference vectors

PUBLICATIONS

- Yang Zhang, Dinei Florencio, Mark Hasegawa-Johnson, “Speech Beamforming without Position and Interference Calibration: a Model-based Approach with Ad-hoc Microphone Array, submitted to *International Conference on Acoustic, Speech and Signal Processing (ICASSP)*. 2017
- Shiyu Chang, Yang Zhang, Jiliang Tang, Dawei Yin, Yi Chang, Thomas S. Huang, “Streaming Recommender Systems”, submitted to *WSDM*. 2017
- Mark Hasegawa-Johnson; Thomas Huang; William Schuh; Renato Azevedo; Kuangxiao Gu; Yang Zhang; Bidisha Roy; Rocio Garcia-Retamero, “A Multidisciplinary Approach to Designing and Evaluating Electronic Medical Record Portal Messages that Support Patient Self-Care”, submitted to *Journal of Biological Informatics*.
- Shiyu Chang*, Yang Zhang*, Jiliang Tang, Dawei Yin, Yi Chang, Mark Hasegawa-Johnson, Thomas S. Huang, “Positive Unlabeled Learning in Streaming Networks”, *ACM SIGKDD*. 2016
- Ruobai Wang, Yang Zhang, Zhijian Ou, Mark Hasegawa-Johnson, “Use of particle filtering and MCMC for inference in probabilistic acoustic tube model”, *IEEE Statistical Signal Processing (SSP)*. 2016
- Yang Zhang, Gautham J. Mysore, Floraine Berthouzoz, Mark Hasegawa-Johnson, “Analysis of Prosody Increment Induced by Pitch Accents for Automatic Emphasis Correction”, *Speech Prosody*. 2016
- Kaizhi Qian, Yang Zhang, Mark Hasegawa-Johnson, “Acoustic Feature Extraction by Statistics Based Local Binary Pattern for Landmark Detection”, submitted to *Speech Prosody*. 2016
- Yang Zhang, Zhijian Ou, Mark Hasegawa-Johnson, “Incorporating AM-FM effect in voiced speech for probabilistic acoustic tube model” *IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*. 2015
- Yang Zhang, Nasser M. Nasrabadi, Mark Hasegawa-Johnson, “Multichannel transient acoustic signal classification using task-driven dictionary with joint sparsity and beamforming” *International Conference on Acoustic, Speech and Signal Processing (ICASSP)*. 2015
- Xiayu Chen, Yang Zhang, Mark Hasegawa-Johnson, “An iterative approach to decision tree construction for context-dependent speech synthesis” *Interspeech*. 2014.
- Yang Zhang, Zhijian Ou, Mark Hasegawa-Johnson, “Improvement of PAT model for speech decomposition.” *International Conference on Acoustic, Speech and Signal Processing (ICASSP)*. 2014.
- Zhijian Ou, and Yang Zhang. "Probabilistic acoustic tube: a probabilistic generative model of speech for speech analysis/synthesis." *International Conference on Artificial Intelligence and Statistics (AISTATS)*. 2012.

PATENT

- Yang Zhang, Mysore J. Gautham, Floraine Berthouzoz, “Automatic Emphasis of Spoken Words”, US Patent No. P5688US01/ADBS.241185. 2015

HONORS

- Qualcomm Innovation Fellowship Finalist 12/2013
- Tsinghua Outstanding Thesis, Department of Electronic Engineering 06/2012
- 2011-2012 Tsinghua Integrated Scholarship 09/2011
- 2008 Tsinghua Freshman Scholarship 2008-2012