

# MENG GE

E-mail: [gemeng@tju.edu.cn](mailto:gemeng@tju.edu.cn)

Phone: +86-13752128651

Github: <https://github.com/gemengtju>

Personal Homepage: <https://gemeng.netlify.app/>



## Education Background

<b>Tianjin University (TJU), Tianjin, China</b>		09/2017 - Now
Ph.D. in Applied Computer Technology	Supervisor: Longbiao Wang	
<b>Tianjin University (TJU), Tianjin, China</b>		09/2015 - 06/2017
M.E. in Software Engineering	Supervisor: Di Jin	
<b>Tianjin Polytechnic University (TJPU), Tianjin, China</b>		09/2011 - 06/2015
B.E. in Software Engineering	GPA: 90.33/100	Ranking: Top3
B.S. in Public Management (double major)		

## Publications

- Meng Ge, Chenglin Xu, Longbiao Wang, Eng Siong Chng, Jianwu Dang, Haizhou Li, "SpEx+: A Complete Time Domain Speaker Extraction Network", in Proc. ISCA Interspeech, Oct. 2020, Accepted.
- Hao Shi, Longbiao Wang, Sheng Li, Chenchen Ding, Meng Ge, Nan Li, Jianwu Dang, Hiroshi Seki, "Singing Voice Extraction with Attention based Spectrograms Fusion", in Proc. ISCA Interspeech, Oct. 2020, Accepted.
- Hao Shi, Longbiao Wang, Meng Ge, Sheng Li, Jianwu Dang, "Spectrograms Fusion with Minimum Difference Masks Estimation for Monaural Speech Dereverberation", in Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), May. 2020.
- Nan Li, Meng Ge, Longbiao Wang, Jianwu Dang, "A Fast Convolutional Self-attention Based Speech Dereverberation Method for Robust Speech Recognition", in Proc. ICONIP, Dec. 2019.
- Meng Ge, Longbiao Wang, Nan Li, Hao Shi, Jianwu Dang, Xiangang Li, "Environment-dependent Attention-driven Recurrent Convolutional NeuralNetwork for Robust Speech Enhancement", in Proc. ISCA Interspeech, Sep. 2019.
- Meng Ge, Longbiao Wang, Seiichi Nakagawa, Yuta Kawakami, Jianwu Dang, Xiangang Li, "Pitch Synchronized Relative Phase with Peak Error Detection For Noise-robust Speaker Recognition", in Proc. ISCSLP, Nov. 2018.
- Dongbo Li, Longbiao Wang, Jianwu Dang, Meng Ge, Haotian Guan, "Distant-talking Speech Recognition Based on Multi-objective Learning Using Phase and Magnitude-based Feature", in Proc. ISCSLP, Nov. 2018.
- Di Jin, Meng Ge, Liang Yang, Dongxiao He, Longbiao Wang, Weixiong Zhang, "Integrative Network Embedding via Deep Joint Reconstruction", in Proc. IJCAI, July. 2018.
- Di Jin, Meng Ge, Zhixuan Li, Wenhuan Lu, Dongxiao He, Francoise Fogelman-Soulie, "Using Deep Learning for Community Discovery in Social Networks", in Proc. ICTAI, Nov. 2017.
- Liang Yang, Meng Ge, Di Jin, Dongxiao He, Huazhu Fu, Jing Wang, Xiaochun Cao, "Exploring the Roles of Cannot-link Constraint in Community Detection via Multi-variance Mixed Gaussian Generative Model", in PloS One, July. 2017.

## Research Experience

**Research Assistant, National University of Singapore (NUS)** 04/2019 - Now

### Research on Target Speech Separation and Extraction via Deep Learning in Multi-talker Conditions

- Research Purpose:** To separate target speech signal from background interference in multi-talker conditions, and to improve the quality and intelligibility of target speech signal for speech applications.
- Proposed a complete time-domain speaker extraction approach to extract target speech signal, named SpEx+
- Extended the time-domain speaker extraction approach into overlapped multi-talker speaker verification task

**Research Assistant, Nanyang Technological University (NTU)** 10/2019 - 04/2020

### Research on Speech Enhancement and Separation for Speech Recognition

- Research Purpose:** To depress the background interference in low-SNR conditions, and to reconstruct high-quality target speech signal for improving speech recognition performance.
- Formulation and implementation of speech enhancement systems for RAST and VB datasets in MASION project
- Researched on multi-channel speech separation using frequency-based speaker extraction and MVDR beamforming
- Built a complete speech enhancement repository in <https://github.com/nanahou/Awesome-Speech-Enhancement>
- Summarized a speech separation repository in [https://github.com/gemengtju/Tutorial\\_Separation](https://github.com/gemengtju/Tutorial_Separation)

**Research on Speech Separation and Drunk Detection in Car Environment**

- **Research Purpose:** 1) To reduce noise and separate speech recordings in car for helping customer service staff better understand user intent; 2) To reduce in-car conflict probability using intoxication detection based on speech.
- Simulated training datasets using clean speech recordings, recorded car environment and synthetic audios
- Used the frequency-based PIT method to extracted target speech based on simulated dataset and real recordings
- Proposed a novel order-aware pairwise intoxication detection approach to detect the speaker state of passengers before order acceptance using speech recordings.

**Certifications & Awards**

- *Oracle Certified Professional (OCP) - Oracle 10g Database Administrator,* Oracle
- *Oracle Database 10g Administrator Certified Associate (OCA),* Oracle
- *Outstanding Student Scholarship Award,* Tianjin University
- *First-Class Scholarship Award,* Tianjin University
- *Outstanding Youth Nomination Award,* Tianjin University
- *Outstanding Graduate Student Award,* Tianjin Polytechnic University