

MENG GE

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Education Background

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

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 Experiences

Research Assistant, National University of Singapore (NUS), Singapore **04/2020 - 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), Singapore **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 MASON 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

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.

Work Experiences***Co-Funder & Senior Software Engineer, Tianjin Chuanhe Technology Co., Ltd.*****03/2014 - 06/2015**

- Received an angel investment of 500,000 yuan in 2014, and built a excellent team with 20 members
- Designed and implemented a Logistics Management System using Struts, Spring and ibatis (SSI framework); MySQL is used as database of this system and Redis is adopted as data cache tool to speed up data loading
- Developed a corresponding Android app for fresh food reservation and delivery based on SSI back-end framework

Software Engineer & Team Leader, iSoftStone (Tianjin) Information Technology Group Co, Ltd. **01/2014 - 07/2014**

- Originated the team to implement the Provident Fund Management (PFM) System and Office Automation (OA) System using Struts, Spring and Hibernate (SSH framework); Oracle is adopted as main dataset of these systems
- JAVA Business Process Management (JBPM) is utilized into OA system to customize the office process

Software Engineer & Team Leader, IBM (Tianjin) Experienced Training Program**06/2013 - 07/2013**

- Designed and developed the School Educational Administration (SEA) System based on MVC design pattern
- Focus on the development of the SEA system's visual statistics module using ECharts visualization library

Leadership & Volunteer Experiences

- *Vice Minister, Graduate Student Union, Tianjin University (TJU)*
- *Vice Minister, Lenovo Idea Elite Club, Tianjin Polytechnic University (TJPU)*
- *Captain, Volleyball Team, Tianjin Polytechnic University (TJPU)*
- *Foreign-Side Volunteer, The 12th Summer Davos Forum*
- *Conference Volunteer, The National Conference on Man-Machine Speech Communication (NCMMSC'19)*
- *Volunteer Leader, The 11th International Seminar on Speech Production (ISSP'17)*
- *Conference Volunteer, The 10th International Symposium on Chinese Spoken Language Processing (ISCSLP'16)*

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*