

MENG GE

Nationality: China

E-mail: gemeng@tju.edu.cn

Phone: +86-13752128651

Personal Homepage: <https://gemengtju.github.io/>



Education Background

Tianjin University (TJU), Tianjin, China		09/2017 - 11/2022
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	Ranking: Top3
B.S. in Public Management (double major)		

Publications

- Meng Ge, Chenglin Xu, Longbiao Wang, Eng Siong Chng, Jianwu Dang, Haizhou Li, "L-SpEx: Localized Target Speaker Extraction", in Proc. ICASSP, May. 2022.
- Zexu Pan, Meng Ge, Haizhou Li, "USEV: Universal Speaker Extraction with Visual Cue", IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP), 2022, 30: 3032-3045.
- Di Jin, Rui Wang, Meng Ge, Dongxiao He, Xiang Li, Wei Lin, Weixiong Zhang, "RAW-GNN: Random Walk Aggregation based Graph Neural Network", in Proc. IJCAI, July. 2022.
- Junjie Li, Meng Ge, Zexu Pan, Longbiao Wang, Jianwu Dang, "VCSE: Time-Domain Visual-Contextual Speaker Extraction Network", in Proc. INTERSPEECH, Sep. 2022.
- Haoran Yin, Meng Ge, Yanjie Fu, Gaoyan Zhang, Longbiao Wang, Lei Zhang, Lin Qiu, Jianwu Dang, "MIMO-DoAnet: Multi-channel Input and Multiple Outputs DoA Network with Unknown Number of Sound Sources", in Proc. INTERSPEECH, Sep. 2022.
- Yanjie Fu, Meng Ge, Haoran Yin, Xinyuan Qian, Longbiao Wang, Gaoyan Zhang, Jianwu Dang, "Iterative Sound Source Localization for Unknown Number of Sources", in Proc. INTERSPEECH, Sep. 2022.
- Zexu Pan, Meng Ge, Haizhou Li, "A Hybrid Continuity Loss to Reduce Over-Suppression for Time-domain Target Speaker Extraction", in Proc. INTERSPEECH, Sep. 2022.
- Nan Li, Meng Ge, Longbiao Wang, Masashi Unoki, Sheng Li, Jianwu Dang, "Global Signal-to-noise Ratio Estimation Based on Multi-subband Processing Using Convolutional Neural Network", in Proc. INTERSPEECH, Sep. 2022.
- Nan Li, Meng Ge, Longbiao Wang, Jianwu Dang, "Dual-stream Speech Dereverberation Network Using Long-term and Short-term Cues", in Proc. IJCNN, July. 2022.
- Yongjie Lv, Longbiao Wang, Meng Ge, Sheng Li, Chenchen Ding, Lixin Pan, Yuguang Wang, Jianwu Dang, Kiyoshi Honda, "Compressing Transformer-Based ASR Model by Task-Driven Loss and Attention-Based Multi-Level Feature Distillation", in Proc. ICASSP, May. 2022.
- Tongtong Song, Qiang Xu, Meng Ge, Longbiao Wang, Hao Shi, Yongjie Lv, Yuqin Lin, Jianwu Dang, "Language-specific Characteristic Assistance for Code-switching Speech Recognition", in Proc. INTERSPEECH, Sep. 2022.
- Qiang Xu, Tongtong Song, Longbiao Wang, Hao Shi, Yuqin Lin, Yongjie Lv, Meng Ge, Qiang Yu, Jianwu Dang, "Self-Distillation Based on High-level Information Supervision for Compressing End-to-End ASR Model", in Proc. INTERSPEECH, Sep. 2022.
- Haoran Yin, Hao Shi, Longbiao Wang, Luya Qiang, Sheng Li, Meng Ge, Gaoyan Zhang, Jianwu Dang, "Simultaneous Progressive Filtering-Based Monaural Speech Enhancement", in Proc. ICONIP, Sep. 2021.
- Luya Qiang, Hao Shi, Meng Ge, Haoran Yin, Nan Li, Longbiao Wang, Sheng Li, Jianwu Dang, "Speech Dereverberation Based on Scale-Aware Mean Square Error Loss", in Proc. ICONIP, Sep. 2021.
- Nan Li, Longbiao Wang, Masashi Unoki, Sheng Li, Rui Wang, Meng Ge, Jianwu Dang, "Robust Voice Activity Detection Using a Masked Auditory Encoder Based Convolutional Neural Network", in Proc. ICASSP, April. 2021.
- Meng Ge, Chenglin Xu, Longbiao Wang, Eng Siong Chng, Jianwu Dang, Haizhou Li, "Multi-stage speaker extraction with utterance and frame-level reference signals", in Proc. ICASSP, April. 2021.
- Meng Ge, Ruixiong Zhang, Wei Zou, Xiangang Li, Cheng Gong, Longbiao Wang, Jianwu Dang, "Order-aware Pairwise Intoxication Detection", in Proc. ISCSLP, Jan. 2021.
- Wupeng Wang, Chenglin Xu, Meng Ge, Haizhou Li, "Neural Speaker Extraction with Speaker-Speech Cross-Attention Network", in Proc. INTERSPEECH, Sep. 2021.

- Yu Jiang, Meng Ge, Longbiao Wang, Jianwu Dang, Kiyoshi Honda, Sulin Zhang, Bo Yu, "A pitch-aware speaker extraction serial network", in Proc. APASIP, Dec. 2020.
- 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.
- 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 Neural Network 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, The Chinese University of Hong Kong (CUHKSZ), China 04/2022 - Now
Research on Speech Separation, Speaker Diarization and Speech Recognition in Multi-talker Conditions

- **Research Purpose:** To extract desired speech signal from background interference in multi-talker conditions, and to do the downstreaming application, including speaker diarization and speech recognition.
- Joint training speech separation and speaker diarization; Pretraining model for multi-speaker speech recognition.

Research Assistant, National University of Singapore (NUS), Singapore 04/2020 - 04/2022
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 MASHION 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

Machine Learning Engineer, AI Lab of Didi Chuxing Company (DiDi), Beijing, China 09/2018 - 05/2019
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 extract 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 an 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

- *As the reviewers of TASLP and ICASSP 2023*
- *Foreign-Side Volunteer, The 12th Summer Davos Forum*
- *Volunteer, IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP'2022)*
- *Conference Volunteer, IEEE Automatic Speech Recognition and Understanding Workshop (ASRU'2019)*
- *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)*
- *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)*

Certifications & Awards

- *Benduo Qingzhi Advanced Speech Science Award,* *Tianjin University*
- *ISCA Grant Award of INTERSPEECH'2019,* *INTERSPEECH2019*
- *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*

葛 檬

出生年月: 1992 年 10 月

电子邮箱: gemeng@tju.edu.cn

联系电话: +86-13752128651

通讯地址: 广东省深圳市龙岗区龙翔大道 2001 号, 香港中文大学(深圳), 道远楼 225 室

民族: 汉族

政治面貌: 中共党员

个人主页: <https://gemengtju.github.io/>



教育背景

天津大学 (Tianjin University, TJU)	09/2017 - 11/2022
博士学位, 应用计算机技术专业	博士生导师: 王龙标教授
天津大学 (Tianjin University, TJU)	09/2015 - 06/2017
硕士学位, 软件工程专业	硕士生导师: 金弟教授 & 杨亮教授
天津工业大学 (Tianjin Polytechnic University, TJPU)	09/2011 - 06/2015
学士学位, 软件工程专业	GPA: 90.33/100
管理双学位, 公共事业管理专业	专业排名: Top3

学术论文(第一/共一/通讯作者)

- Zexu Pan, Meng Ge*, Haizhou Li, "USEV: Universal Speaker Extraction with Visual Cue", **IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)**, 2022, 30: 3032-3045. **JCR-Q1, IF=4.364**
- Di Jin, Rui Wang, Meng Ge*, Dongxiao He*, Xiang Li, Wei Lin, Weixiong Zhang, "RAW-GNN: Random Walk Aggregation based Graph Neural Network", in Proc. **IJCAI**, July. 2022. **CCF-A**
- Di Jin, Meng Ge, Liang Yang*, Dongxiao He, Longbiao Wang, Weixiong Zhang, "Integrative Network Embedding via Deep Joint Reconstruction", in Proc. **IJCAI**, July. 2018. **CCF-A**
- Tingting Wang, Zexu Pan, Meng Ge*, Zhen Yang, Haizhou Li, "Time-Domain Speech Separation Network with Graph Encoding Auxiliary", **IEEE Signal Processing Letters**, 2023. **JCR-Q2, IF=3.201**
- 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. **JCR-Q2, IF=3.752**
- Meng Ge, Chenglin Xu, Longbiao Wang*, Eng Siong Chng, Jianwu Dang, Haizhou Li, "L-SpEx: Localized Target Speaker Extraction", in Proc. **ICASSP**, May. 2022. **CCF-B**
- Meng Ge, Chenglin Xu, Longbiao Wang*, Eng Siong Chng, Jianwu Dang, Haizhou Li, "Multi-stage speaker extraction with utterance and frame-level reference signals", in Proc. **ICASSP**, April. 2021. **CCF-B**
- Nan Li, Longbiao Wang*, Masashi Unoki, Sheng Li, Rui Wang, Meng Ge*, Jianwu Dang, "Robust Voice Activity Detection Using a Masked Auditory Encoder Based Convolutional Neural Network", in Proc. **ICASSP**, April. 2021. **CCF-B**
- Junjie Li, Meng Ge*, Zexu Pan, Longbiao Wang*, Jianwu Dang, "VCSE: Time-Domain Visual-Contextual Speaker Extraction Network", in Proc. **INTERSPEECH**, Sep. 2022. **CCF-C**
- Yanjie Fu, Meng Ge*, Haoran Yin, Xinyuan Qian, Longbiao Wang*, Gaoyan Zhang, Jianwu Dang, "Iterative Sound Source Localization for Unknown Number of Sources", in Proc. **INTERSPEECH**, Sep. 2022. **CCF-C**
- Nan Li, Meng Ge*, Longbiao Wang*, Masashi Unoki, Sheng Li, Jianwu Dang, "Global Signal-to-noise Ratio Estimation Based on Multi-subband Processing Using Convolutional Neural Network", in Proc. **INTERSPEECH**, Sep. 2022. **CCF-C**
- Nan Li, Meng Ge*, Longbiao Wang*, Jianwu Dang, "Dual-stream Speech Dereverberation Network Using Long-term and Short-term Cues", in Proc. **IJCNN**, July. 2022. **CCF-C**
- Meng Ge, Chenglin Xu, Longbiao Wang*, Eng Siong Chng, Jianwu Dang, Haizhou Li, "SpEx+: A Complete Time Domain Speaker Extraction Network", in Proc. **INTERSPEECH**, Oct. 2020. **CCF-C**
- Meng Ge, Longbiao Wang*, Nan Li, Hao Shi, Jianwu Dang, Xiangang Li, "Environment-dependent Attention-driven Recurrent Convolutional Neural Network for Robust Speech Enhancement", in Proc. **INTERSPEECH**, Sep. 2019. **CCF-C**
- Luya Qiang, Hao Shi, Meng Ge*, Haoran Yin, Nan Li, Longbiao Wang*, Sheng Li, Jianwu Dang, "Speech Dereverberation Based on Scale-Aware Mean Square Error Loss", in Proc. **ICONIP**, Sep. 2021. **CCF-C**
- Di Jin, Meng Ge, Zhixuan Li, Wenhuan Lu*, Dongxiao He, Françoise Fogelman-Soulie, "Using Deep Learning for Community Discovery in Social Networks", in Proc. **ICTAI**, Nov. 2017. **CCF-C**
- Meng Ge, Ruixiong Zhang, Wei Zou, Xiangang Li, Cheng Gong, Longbiao Wang*, Jianwu Dang, "Order-aware Pairwise Intoxication Detection", in Proc. **ISCSLP**, Jan. 2021.
- 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.

- **Yu Jiang, Meng Ge**, Longbiao Wang*, Jianwu Dang, Kiyoshi Honda, Sulin Zhang, Bo Yu, "A pitch-aware speaker extraction serial network", in Proc. **APASIP**, Dec. 2020.

学术论文(其他)

- Yongjie Lv, Longbiao Wang, **Meng Ge**, Sheng Li, Chenchen Ding, Lixin Pan, Yuguang Wang, Jianwu Dang, Kiyoshi Honda, "Compressing Transformer-Based ASR Model by Task-Driven Loss and Attention-Based Multi-Level Feature Distillation", in Proc. **ICASSP**, May. 2022. **CCF-B**
- Hao Shi, Longbiao Wang, **Meng Ge**, Sheng Li, Jianwu Dang, "Spectrograms Fusion with Minimum Difference Masks Estimation for Monaural Speech Dereverberation", in Proc. **ICASSP**, May. 2020. **CCF-B**
- Tongtong Song, Qiang Xu, **Meng Ge**, Longbiao Wang, Hao Shi, Yongjie Lv, Yuqin Lin, Jianwu Dang, "Language-specific Characteristic Assistance for Code-switching Speech Recognition", in Proc. **INTERSPEECH**, Sep. 2022. **CCF-C**
- Haoran Yin, **Meng Ge**, Yanjie Fu, Gaoyan Zhang, Longbiao Wang, Lei Zhang, Lin Qiu, Jianwu Dang, "MIMO-DoAnet: Multi-channel Input and Multiple Outputs DoA Network with Unknown Number of Sound Sources", in Proc. **INTERSPEECH**, Sep. 2022. **CCF-C**
- Wupeng Wang, Chenglin Xu, **Meng Ge**, Haizhou Li, "Neural Speaker Extraction with Speaker-Speech Cross-Attention Network", in Proc. **INTERSPEECH**, Sep. 2021. **CCF-C**
- Qiang Xu, Tongtong Song, Longbiao Wang, Hao Shi, Yuqin Lin, Yongjie Lv, **Meng Ge**, Qiang Yu, Jianwu Dang, "Self-Distillation Based on High-level Information Supervision for Compressing End-to-End ASR Model", in Proc. **INTERSPEECH**, Sep. 2022. **CCF-C**
- Wupeng Wang, Chenglin Xu, **Meng Ge**, Haizhou Li, "Neural Speaker Extraction with Speaker-Speech Cross-Attention Network", in Proc. **INTERSPEECH**, Sep. 2021. **CCF-C**
- 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. **INTERSPEECH**, Oct. 2020. **CCF-C**
- Haoran Yin, Hao Shi, Longbiao Wang, Luya Qiang, Sheng Li, **Meng Ge**, Gaoyan Zhang, Jianwu Dang, "Simultaneous Progressive Filtering-Based Monaural Speech Enhancement", in Proc. **ICONIP**, Sep. 2021. **CCF-C**
- 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. **CCF-C**
- 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.

科研经历

- 博士后研究员 (Research Fellow), 新加坡国立大学, 导师: 王鑫超教授 03/2023 - Now
- 研究助理 (Research Assistant), 香港中文大学(深圳), 导师: 李海洲教授 04/2022 - 03/2023
- CUHK-LAH!数据集: 参与设计和录制首个音频、视频和脑电数据全覆盖的多模态数据集 CUHK-LAH!
 - 实时目标语音提取系统: 研究和开发基于多模态信号(音视频和脑电)的实时智能助听系统, 支持多说话人场景应用, 系统时延 700 毫秒左右, 可应用于线上会议系统, AR 眼镜, 及相关可穿戴设备中。
- 研究助理 (Research Assistant), 新加坡国立大学, 导师: 李海洲教授 04/2020 - 04/2022
- 目标提取研究: 期间研究的目标语音提取工作(SpEx+和 SpEx++)在当时达到最优性能, 获近 100 的文章引用量
 - 智能音幕应用: 多通道语音分离和声源定位的相关成果被应用至华为的远程会议终端 IdeaHub 智能音幕产品中
- 研究助理 (Research Assistant), 南洋理工大学, 导师: Eng Siong Chng 教授 10/2019 - 04/2020
- 语音增强研究: 低信噪比环境下的语音增强研究成果被应用于新加坡政府的 MAISON 项目
 - 语音技术整理: 期间整理的语音增强(<https://github.com/nanahou/Awesome-Speech-Enhancement>)和语音分离分享(https://github.com/gemengtju/Tutorial_Separation)在 Github 上收到 1000+星
- 机器学习算法工程师, 滴滴出行-AI Lab 语音实验室(北京), 导师: 李先刚博士 09/2018 - 05/2019
- 醉酒识别研究: 首次利用语音来判断乘客是否醉酒状态, 曾被应用于滴滴打车软件. 该技术为当时司乘冲突及司机投诉率减少至 50%提供了有力的技术支撑。
 - 语音分离研究: 成果被应用于滴滴客服系统, 给客服理解嘈杂环境下司乘的反馈通话提供技术保障。

获奖与专利

- **葛檬**, 王龙标, 党建武. 基于注意力驱动循环卷积网络的环境自适应语音增强算法, **已授权**, 专利号: CN201910166373.9
- **葛檬**, 张睿雄. 一种订单处理方法、装置、电子设备及存储介质, 实质审查中, 申请号: CN201910414644.8
- 关昊天, 姜宇, **葛檬**, 廖启波. 基于时域单元的声源定位方法、装置及系统, 实质审查中, 申请号: CN202010401597.6
- 姜宇, 王龙标, **葛檬**, 党建武, 本多清志. 一种基于复数门控循环单元的波束形成方法, 实质审查中, 申请号:

CN202111524413.6

- 邓利群, 敖君逸, 葛檬, 李海洲, 杨宇庭, 陈晓. 一种语音处理方法及其相关设备, 实质审查中
- 天津大学本多清志先端言语科学奖
- 获 ICASSP2023 深度 3D 音频信号处理挑战赛(L3DAS23)第三名成绩
- 获 INTERSPEECH'2019 国际语音顶会 ISCA Grant 奖
- 获 ORACLE 10g 数据库 OCA 和 OCP 国际认证
- 第一届天津大学智能与计算学部杰出青年提名奖

科研项目(参与)

- 新加坡 KCLASS 项目, Single-Channel Far-field Speaker Diarization for Interview Rooms with Far-field Voice Activity Detection, 2023.04-2025.04
- 深圳市大数据研究院项目, 类脑听觉注意力理论与工程化实践, **800 万元**, 2022.06-2025.06
- 华为-香港中文大学(深圳)合作项目, 多模态自监督预训练技术在语音处理的应用, **390.84 万元**, 2022.01-2023.12
- 国家重点研发计划“智能机器人”专项, 基于语言认知机理的类脑自然语言识别与交互(子课题一), **161/908.93 万元**, 2019.06-2022.05
- 国家自然科学基金面上项目, 面向混响环境的多口音语音识别研究, **62 万元**, 2018.01-2021.12
- 天津市新一代人工智能科技重大专项, 面向机器人的复杂环境语音对话关键技术及系统实现, **150 万元**, 2018.10-2021.09
- 滴滴出行科研合作项目, 面向车载环境的语音分离, **25 万元**, 2021.10-2022.09
- 华为-天津大学科研合作项目, 扇形智能音幕合作项目, **103 万元**, 2020.06-2021.03

学术/社会活动与成果应用

- TASLP、ICASSP、INTERSPEECH、Pattern Recognition 等国际高水平期刊和会议的审稿人
- 多次受邀在中国计算机学会语音专委会“走进高校”系列活动进行学术报告
- 担任第 12 届夏季达沃斯论坛外方志愿者, 与卡耐基梅隆大学研究员 Rita 交流语音在医疗领域的研究与应用
- 多次参与组织国际高水平语音顶会的举办和协调:
 - IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP'2022)
 - IEEE Automatic Speech Recognition and Understanding Workshop (ASRU'2019)
 - The National Conference on Man-Machine Speech Communication (NCMMSC'19)
 - The 11th International Seminar on Speech Production (ISSP'17)
 - The 10th International Symposium on Chinese Spoken Language Processing (ISCSLP'16)
- 指导学生获 2021 年同花顺中英混合语音识别比赛一等奖, 2022 年 Magichub 重口音对话语音识别比赛二等奖, 2023 年 L3DAS23 国际深度 3D 音频信号处理挑战赛第三名.
- 成果被应用于天津大学谢辉教授团队研发的智能车中, 在天津大学海棠节中亮相展出智能车语音控制
- 基于听觉机制的语音信号处理技术被应用于新大陆科技集团有限公司, 将智能语音技术集成于家居、支付、物流等场景的智能硬件设备, 新增产值近 1 亿元, 利润 2000 余万元, 取得了良好的经济效益.