苑炜弢

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研究方向

- 深度学习，深度网络算法
- 单声道信源分离
- 凸优化
- 语音信号处理

教育背景

2004/9-2008/7，北京大学，数学科学学院-数学系，博士，导师：彭立中

科研与学术工作经历

2015/01-今，天津工业大学，计算机科学与技术学院，讲师

主持或参加科研项目（课题）及人才计划项目情况

项目负责人 |天津市自然科学基金-面上项目 | 2019/04-2022/03

· 针对语音信号的篡改检测理论及算法研究（19JCYBJC15600）

· 10 万，在研，主持

项目负责人 | 天津市教育委员会基金 | 2018/11-2021/10

· 基于多目标对抗网络的语音安全及认证技术研究（2018KJ218）

· 6 万，在研，主持

项目参与人 | 天津市教育委员会基金 | 2017/11-2020/10

· 即时通讯软件中语音安全及真伪鉴定技术研究（2017KJ089）

· 6 万，在研，第二参与人

项目参与人 | 天津市自然科学基金-青年项目 | 2017/04-2020/03

· 基于线性预测频谱调制的语音水印及语音篡改检测技术研究（17JCQNJC00100）

· 6 万，已结题，参与

项目参与人 | 国家自然科学基金青年项目 | 2019/01-2021/12

· 基于门控卷积神经网络和长期记忆建模的复杂文本分类模型研究（61806142）

· 20 万，在研，参与

代表性研究成果

1. **Weitao Yuan**, Shengbei Wang, Xiangrui Li, Masashi Unoki, Wenwu Wang, A Skip Attention Mechanism for Monaural Singing Voice Separation, IEEE Signal Processing Letters, vol. 26, no. 10, pp. 1481-1485, 2019. **(CCF-C类期刊)**

2. **Weitao Yuan**, Shengbei Wang, Xiangrui Li, Masashi Unoki, Wenwu Wang, "Proximal deep recurrent neural network for monaural singing voice separation," Proc. 44th International Conference on Acoustics, Speech and Signal Processing (ICASSP2019), pp. 286 - 290, 2019. **(CCF-B类会议)**

3. Shengbei Wang, **Weitao Yuan***, Masashi Unoki, Multi-subspace Echo Hiding based on Time-Frequency Similarities of Audio Signals, IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 28, pp. 2349-2363, 2020. **(CCF-B 类期刊)**.

4. **Weitao Yuan**, Boxin He, Shengbei Wang, Jianming Wang, Unoki, Masashi Unoki, Enhanced feature network for monaural singing voice separation, Speech Communication, vol.106, pp. 1-6, 2019. **(CCF-B类期刊)**

5. Shengbei Wang, Chao Wang, **Weitao Yuan**, Lin Wang, Jianming Wang*****, A secure echo-hiding audio watermarking method based on improved PN sequence and robust principal component analysis, IET Signal Processing, vol.14, no. 4, pp. 229 -242, 2020. **(CCF-C类期刊)**

6. Shengbei Wang, **Weitao Yuan**, Jianming Wang, Masashi Unoki, "Inaudible speech watermarking based on self-compensated echo-hiding and sparse subspace clustering," Proc. 44th International Conference on Acoustics, Speech and Signal Processing (ICASSP2019), pp. 2632 - 2636, 2019. **(CCF-B类会议)**

7. Shengbei Wang, **Weitao Yuan**, Jianming Wang, Masashi Unoki, "Speech Watermarking based on robust principle component analysis and formant manipulations," Proc. 43rd International Conference on Acoustics, Speech and Signal Processing (ICASSP2018), pp. 2082-2086, 2018. **(CCF-B类会议)**

8. Boxin He, Shengbei Wang*, **Weitao Yuan**, Jianming Wang, Masashi Unoki, Data augmentation for monaural singing voice separation based on variational autoencoder and generative adversarial network, IEEE International Conference on Multimedia and Expo (ICME2019), pp.1354-1359, 2019. **(CCF-B类会议).**

9. **Weitao Yuan**, Xiaodan Liang, Hanning Chen, Lin Na, and Tao Zou, A NSGA-II with Alternating Direction Method of Multipliers Mutation for Solving Multi-objective Robust Principal Component Analysis Problem, Journal of Computational and Theoretical Nanoscience, vol. 13, pp. 1-12, 2016.

10. **Weitao Yuan**, Lin Na, Chen, Hanning, Liang Xiaodan, He, Maowei， A NSGA-II with ADMM Mutation for Solving Multi-objective Robust PCA Problem, Communications in Computer and Information Science, vol.562, pp. 583-597,2015.

11. **Weitao Yuan**, Xiaodan Liang, Hanning Chen, Lin Na, and Tao Zou, A NSGA-II with Alternating Direction Method of Multipliers Mutation for Solving Multi-objective Robust Principal Component Analysis Problem, Journal of Computational and Theoretical Nanoscience, vol. 13, pp. 1-12, 2016.

12. BoJin Zhuang, **Weitao Yuan**, Lizhong Peng, Lifting scheme of symmetric tight wavelets frames. Science in China Series: Information Sciences, vol. 51, no. 8, pp. 1117-1124, 2008.

13. Lizhong Peng, **Weitao Yuan**, Higher-Density Dual Tree Discrete Wavelet Transform, International Journal of Wavelets, Multiresolution and Information Processing (IJWMIP), vol. 5, no. 5, pp. 815-841, 2007.

14. **Weitao Yuan**, Jingfeng Guo, Generic Programming with Reusable Wavelet Transform, Proceedings of the Third International Conference on Wavelet Analysis and Its Applications (WAA), pp. 694-700, 2003.

15. Lihong Qiao, Wei Guo, **Weitao Yuan**, Kaifu Niu, Lizhong Peng, Texture analysis based on Bidimensional Empirical Mode Decomposition and quaternions, International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR 2009), pp. 84-87, 2009.

16. Lihong Qiao， Lizhong Peng, Wei Guo, **Weitao Yuan**, A novel image fusion algorithm based on 2D EMD and IHS. 7th International Conference on Machine Learning and Cybernetics, ICMLC, July 12-15, pp. 4040-4044, 2008.