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研究方向

- 多媒体信息隐藏

- 语音/音频 数字水印

- 基于数字水印的语音信号篡改检测

- 语音信号处理

教育背景

学位：博士| 2012.10 --- 2015.09

毕业院校：日本北陆先端科学技术大学院大学 信息科学

                JAPAN ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (JAIST)

科研与学术工作经历

2016/4–至今，天津工业大学，计算机科学与软件学院，讲师 （硕士生导师）

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 | 国家自然科学基金青年项目 | 2020/01-2022/12

· 语音声学参数篡改检测的关键理论及算法研究（61902280）

· 28 万，在研，主持

项目负责人 | 天津市自然科学基金 | 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，在研，主持

项目负责人 | 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，主持

项目参与人 | 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，第二参与人

项目参与人 | 天津市自然科学基金 | 2016/10-2019/09

· 基于深度神经网络的市民大数据分析关键技术研究（16JCYBJC42300）
· 10万，在研，第二参与人

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，第三参与人

项目参与人 | 国家自然科学基金青年项目 | 2017/01-2019/12

· 基于感知哈希学习的图像认证方法研究（61602344）
· 20万，在研，参与人

天津市"131"创新型人才培养工程第三层次人选 | 2017-2019

代表性研究成果和学术奖励

1. Weitao Yuan, **Shengbei Wang***, Xiangrui Li, Masashi Unoki, Wenwu Wang, A Skip Attention Mechanism for Monaural Singing Voice Separation, IEEE Signal Processing Letters, 2019.

2. **Shengbei Wang,** Weitao Yuan*, Jianming Wang, Masashi Unoki, Detection of Speech Tampering Using Sparse Representations and Spectral Manipulations Based Information Hiding, Speech Communication, 112, pp. 1–14, 2019. **(CCF-B类期刊)**.

3. **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)**

4. 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)**

5. 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)**

6. **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)**

7. Jianwu Dang, **Shengbei Wang***, and Masashi Unoki, "Investigation into Vowel and Consonant Structures in Articulatory and Auditory Spaces using Laplacian eigenmaps," Proc. 41st International Conference on Acoustics, Speech and Signal Processing (ICASSP2016), pp. 5355-5359, 2016. **(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 (ICME) 2019, Paper ID 545, Accepted, **(CCF-B类会议)**.

9. **Shengbei Wang***, Masashi Unoki, and Nam Soo Kim, "Formant Enhancement based Speech Watermarking for Tampering Detection," Proc. 15th Annual Conference of International Speech Communication Association (InterSpeech2014), pp. 1366-1370, Singapore, 2014. (EI) (CCF-C类会议)

10. **Shengbei Wang*** and Masashi Unoki, "Speech Watermarking Method based on Formant Tuning," IEICE Trans. INF. & SYST., Enriched Multimedia, vol. E98-D, no. 1, pp. 29-37, Jan., 2015.

11. **Shengbei Wang*,** Ryota Miyauchi, Masashi Unoki, and Nam Soo Kim, "Tampering Detection Scheme for Speech Signals using Formant Enhancement based Watermarking," Journal of Information Hiding and Multimedia Signal Processing (JIHMSP), vol. 6, no. 6, pp. 1264-1283, Nov., 2015.

12. **Shengbei Wang*** and Masashi Unoki, "Watermarking of Speech Signals based on Formant Enhancement," Proc. 22nd European Signal Processing Conference (EUSIPCO2014), pp. 1257-1261, Portugal, 2014.

13. **Shengbei Wang***, Xuyang Liu, Xin Dang, Jianming Wang, A robust speech watermarking based on Quantization Index Modulation and Double Discrete Cosine Transform, 2017 10th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP-BMEI2017), pp. 1-6, 2017.

14. **Shengbei Wang*** and Masashi Unoki, "Hybrid Speech Watermarking based on Formant Enhancement and Cochlear Delay," Proc. 10th Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP2014), pp. 272-275, Japan, 2014.

15. **Shengbei Wang*** and Masashi Unoki, "Watermarking Method for Speech Signals based on Modifications to LSFs," Proc. 9th Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP2013), pp. 283-286, China, 2013.

16. Erick Christian Garcia Alvarze, **Shengbei Wang**, and Masashi Unoki, "An Automatic Watermarking in CELP Speech Codec based on Formant Tuning," Proc. 11th Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP2015), pp. 160-163, Australia, 2015.

17. Masashi Unoki, Jessada Karnjana, **Shengbei Wang**, Nhut Minh Ngo, and Ryota Miyauchi, "Comparative Evaluations of Inaudible and Robust Watermarking for Digital Audio Signals," Proc. 21st International Congress on Sound and Vibration (ICSV2014), China, 2014.

18. Nhut Minh Ngo, **Shengbei Wang**, Masashi Unoki, "Method of Digital-audio Watermarking Based on Cochlear Delay in Sub-bands," Proc. 27th International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC 2012), D-W1-03, Japan, 2012.