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Shicheng Hu

Professional Summary

- Standardization Engineer with 2 years of experience in telecommunications standards development, supported by a strong academic background in communication technologies from Bachelor to Ph.D. studies.
- Filed 20+ patents in advanced wireless domains, including AI-native air interface and integrated sensing and communication (ISAC).
- Experienced in leading algorithm design from an operator's perspective, with a comprehensive understanding of both product implementation and algorithmic optimization.
- Conducted research on key next-generation technologies such as 6G AI-driven communication and ISAC.
- Familiar with the standardization process, including proposal drafting, technical analysis, and post-meeting research synthesis and patent filing.
- Knowledgeable of 3GPP TS 38.211-214 protocols and strong self-learning capabilities.

Work Experience

2024.02– Until Now — **Senior Communication Standardization Engineer**, *Shanghai Honor Intelligent Technology Development Co.,Ltd.*, Shanghai, China
- Contributed to 5G-Advanced (Release-19/20) AI/ML for air interface in 3GPP RAN WGL, focusing on beam management enhancement and CSI compression. Submitted 5+ technical proposals.
- Filed 10+ patents in areas including AI-driven beam management and CSI compression.
- Researched 6G AI-native air interface technologies, developing solutions for AI-based modulation and reference signal design. Filed 10+ patents.
- Investigated 6G ISAC, specializing in OTFS waveform design. Filed 5+ patents.
- Represented Honor at major industry forums including 6G Development Conference, 6G Technology Summit, IMT-2030/2020 Focus Group meetings, and GSMA TSG meetings, delivering technical reports on industry trends.

2023.07– 2024.01 — **Senior Network R&D Engineer**, *China Mobile (Hangzhou) Information Technology Co., Ltd.*, Hangzhou, China
- Updated enterprise testing standards and performance requirements for Wi-Fi 7 routers.
- Developed AI-based WLAN performance optimization algorithms at the MAC layer to improve user experience.
- Represented China Mobile at international standards organizations including World WLAN Application Alliance (WAA) and IEEE 802.11 meetings, and hosted technical workshops for industry partners.

Education background

2018.09– 2023.07 — **P.H.D., Communication and Information System** , *Shanghai Advanced Research Institute, Chinese Academy of Sciences*, Shanghai, China

2013.09– 2017.07 — **Bachelor, Communication Engineering**, *Henan University*, Henan, China

Publications

SCI 1. **S. Hu**, S. Wan, M. Yang, K. Kang, H. Qian, "An Improved SLM Algorithm for OFDMA System with Implicit Side Information", Springer J. Signal Process. Syst., 2022.

2. **S. Hu**, S. Wan, M. Yang, K. Kang, H. Qian, "Low Complexity Blind Detection in OFDM Systems with Phase Noise", Elsevier Digit. Signal Process., 2022.

3, K. Han, H. Qian, **S. Hu**, K. Kang, "Performance Analysis of Hybrid Beamforming Systems with Analog Mismatches", Elsevier Phys. Commun., 2022.

4. S. Wan, **S. Hu**, K. Kang, X. Luo, H. Qian, "A Robust PAPR Reduction Method for Hybrid Beamforming Transmitter", Elsevier Digit. Signal Process., 2023.

5. D. Xiao, **S. Hu**, K. Kang, H. Qian, "An Improved AoA Estimation Algorithm for BLE System in the Presence of Phase Noise", IEEE Trans. Consumer Electron., 2023.

6. **S. Hu**, L. Lian, H. Qian, K. Kang, M. Li, "Blind Multi-Level MAP Detection With Phase Noise Compensation in MIMO-OFDM Systems', IEEE Trans. Comm., 2024.

7. **S. Hu**, H. Zhu, Q. Kuang, H. Qian, "Optimal Receive Beamforming for Over-the-Air Computation", IEEE Trans. Veh. Technol., (**Under preparation**)

EI 8. **S. Hu**, M. Yang, K. Kang, H. Qian, "Low Complexity SLM for OFDMA System with Implicit Side Information", IEEE ICASSP, Toronto, ON, Canada, June., 2021.

9. **S. Hu**, L. Yang, H. Qian, "Deep Alternating Direction Multiplier Method Network for Event Detection", Journal of Electronics and Information Technology, 2022.

10. D. Xiao, **S. Hu**, H. Qian, K. Kang, M. Li, "The Improved SLM Algorithm Used in Hybrid Beamforming Architecture", Journal of University of Chinese Academy of Sciences, 2023

Research Projects

2018.04– **Wi-Fi indoor fingerprint location based on machine learning**: Without GPS, the Wi-Fi signal is an
2018.09 alternative way for the indoor location. We design machine learning algorithms for the Wi-Fi indoor location based on the fingerprint of Wi-Fi signal. Project content: data collection, algorithm design and realization with Python.

2020.04– **Water quality monitoring**: Monitoring the river water quality by a wireless sensor network. Project
2020.07 content: literature review, algorithm design, data processing with Python, and communication with domain experts.

2022.04– **Fixed-point simulation of Wi-Fi 7 systems**: Build up the Wi-Fi 7 simulation system according to Draft
2022.11 1. Project content: IQ imbalance compensation and EHT-SIG decoding with Matlab and C.

Teaching assistant experience

2020 Spring *Principles of communication*, University of ShanghaiTech, 60 students.
2021 Autumn *Academic essay writing*, University of ShanghaiTech, 250 students.

Academic activities

2021.06 ICASSP 2021, poster online.
2022.08 ISAIC 2022, reviewer.

Volunteer experience

2021-01 Shanghai Science and Technology Museum, spring festival volunteer.
2021-09 ShanghaiTech University, welcome volunteer.

Software skills

Python, Matlab, C