

YUFENG YANG

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SUMMARY

PhD candidate in Computer Science at The Ohio State University with 5+ years of research experience in robust ASR, source separation, and self-supervised learning. Former Research Scientist Intern at Meta, MERL, and Microsoft, with a focus on multi-channel speech foundation model and ASR.

EDUCATION

The Ohio State University - Columbus, OH Advisor: Prof. DeLiang Wang <i>Ph.D.</i> candidate, Computer Science and Engineering	2026 (expected)
Georgia Institute of Technology - Atlanta, GA <i>M.S.</i> , Electrical and Computer Engineering	2020
Southeast University - Nanjing, China <i>B.E.</i> , Information Engineering	2018

INDUSTRY RESEARCH EXPERIENCE

Research Scientist Intern May - August 2025	Meta Menlo Park, CA, USA
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- Proposed multi-channel differential ASR for smart glasses, improving robustness of wearer speech recognition in real-world scenarios against side-talk
- Integrated complementary frontends for on-device streaming ASR without increasing latency
- Demonstrated that the proposed system outperforms the internal baseline with up to 18% relative WER reduction under streaming and on-device Bluetooth bandwidth constraints
- Resulted in a first-authored paper under review

Research Scientist Intern May - August 2024	Meta Menlo Park, CA, USA
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- Proposed M-BEST-RQ, a novel array-agnostic multi-channel speech foundation model for smart glasses
- Demonstrated that the model trained on one device can work across different wearable devices on conversational ASR, source localization, and wearer VAD
- With only 8 hours of labeled speech for fine-tuning, the proposed model achieves a 3% absolute WER reduction over a baseline trained on 2k hours of labeled data for conversational ASR, demonstrating strong label efficiency
- Resulted in a first-authored paper accepted to ICASSP 2025

Research Intern May - August 2023	Mitsubishi Electric Research Laboratories Cambridge, MA, USA
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- Developed unsupervised source separation methods leveraging self-supervised learning representations for multi-talker scenarios
- Evaluated separation quality and representation transfer across different acoustic conditions

Research Intern May - August 2019	Microsoft Research Asia Beijing, China
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- Developed and evaluated models for overlapped speech detection and speaker separation in conversational scenarios

SELECTED PUBLICATIONS

Yufeng Yang, Yiteng Huang, Yong Xu, Li Wan, Suwon Shon, Yang Liu, Yifeng Fan, Zhaojun Yang, Olivier Siohan, Yue Liu, Ming Sun, and Florian Metze, “Multi-channel differential ASR for robust wearer speech recognition on smart glasses,” *arXiv:2509.14430*, 2025. (*Under Review*)

Yufeng Yang, Desh Raj, Ju Lin, Niko Moritz, Junteng Jia, Gil Keren, Egor Lakomkin, Yiteng Huang, Jacob Donley, Jay Mahadeokar, and Ozlem Kalinli, “M-BEST-RQ: A Multi-channel speech foundation model for smart glasses,” in *Proc. IEEE ICASSP*, 2025, 5 pages.

Yufeng Yang, Ashutosh Pandey, and DeLiang Wang, “Towards decoupling frontend enhancement and backend recognition in monaural robust ASR,” *Computer Speech & Language*, 101821, 2025.

Yufeng Yang, Hassan Taherian, Vahid Ahmadi Kalkhorani, and DeLiang Wang, “Elevating robust ASR by decoupling multi-channel speaker separation and speech recognition,” in *Proc. IEEE ICASSP*, 2025, 5 pages.

Yufeng Yang, Ashutosh Pandey, and DeLiang Wang, “Time-domain speech enhancement for robust automatic speech recognition,” in *Proc. Interspeech*, 2023, pp. 4913-4917.

OTHER PUBLICATIONS

Heming Wang, **Yufeng Yang**, and DeLiang Wang, “A speech prediction model based on codec modeling and Transformer decoding,” *Computer Speech & Language*, 101892, 2025.

Yufeng Yang, Hassan Taherian, Vahid Ahmadi Kalkhorani, and DeLiang Wang, “Elevating multi-talker robust ASR by decoupling speaker separation and speech recognition,” *arXiv:2503.17886*, 2025.

Yufeng Yang, Peidong Wang, and DeLiang Wang, “A Conformer based acoustic model for robust automatic speech recognition,” *arXiv:2203.00725*, 2022.

Desmond Caulley, **Yufeng Yang**, and David Anderson, “EACELEB: An east Asian language speaking celebrity dataset for speaker recognition,” *arXiv:2203.05333*, 2022.

Chuan Zhang*, **Yufeng Yang*** (co-first), Shunqing Zhang, Zaichen Zhang, and Xiaohu You, “Residual-based detections and unified architecture for massive MIMO uplink,” *Journal of Signal Processing Systems*, vol. 91, pp. 1039-1052, 2019.

Yufeng Yang, Wence Zhang, Jiejun Jin *et al.*, “Efficient compressed Landweber detector for massive MIMO,” in *Proc. IEEE SiPS*, 2018, pp. 65-70.

Yufeng Yang, Ye Xue, Xiaohu You, and Chuan Zhang, “An efficient conjugate residual detector for massive MIMO systems,” in *Proc. IEEE SiPS*, 2017, pp. 1-6.

TECHNICAL SKILLS

Programming: Python, Bash, C++, MATLAB, L^AT_EX

Frameworks: PyTorch, TensorFlow, Kaldi, ESPnet, NeMo, SpeechBrain, TorchAudio

HONORS & AWARDS

National Scholarship (Top 0.2%), Ministry of Education, China,	2015
Meritorious Winner (Top 5%), Interdisciplinary Contest in Modeling (ICM)	2016
Leike Scholarship, Southeast University	2016