Peidong Wang

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INDUSTRIAL EXPERIENCE

Microsoft — Redmond, Washington, U.S.A.
Senior Scientist — July 2021 - Present
Speech and Language Group

Google — New York, New York, U.S.A.
Research Intern — May 2020 - Aug. 2020
Topic: Semi-Supervised End-to-End Speech Recognition
Mentor(s): Tara N. Sainath, Ron J. Weiss

Microsoft — Redmond, Washington, U.S.A.
Research Intern — May 2019 - July 2019
Topic: Meeting Captioning
Mentor(s): Jinyu Li, Yifan Gong

Tencent AI Lab — Bellevue, Washington, U.S.A.
Research Intern — May 2018 - Aug. 2018
Topics: End-to-End Speech Recognition
Mentor(s): Dong Yu

SELECTED PUBLICATIONS (full list)

[15] Jian Xue*, **Peidong Wang***, Jinyu Li*, Eric Sun, "A Weakly-Supervised Streaming Multilingual Speech Model with Truly Zero-Shot Capability", arXiv:2211.02499, 2022. (* denotes equal contribution.)

[14] **Peidong Wang**, Eric Sun, Jian Xue, Yu Wu, Long Zhou, Yashesh Gaur, Shujie Liu, Jinyu Li, "LAMASSU: Streaming Language-Agnostic Multilingual Speech Recognition and Translation using Neural Transducers", arXiv:2211.02809, 2022.

[13] Heming Wang, Yao Qian, Hemin Yang, Naoyuki Kanda, **Peidong Wang**, Takuya Yoshioka, Xiaofei Wang, Yiming Wang, Shujie Liu, Zhuo Chen, DeLiang Wang, Michael Zeng, "Data2vec-SG: Improving Self-supervised Learning Representations for Speech Generation Tasks", in *Proc. of ICASSP*, 2023, to appear.

[12] Zili Huang, Zhuo Chen, Naoyuki Kanda, Jian Wu, Yiming Wang, Jinyu Li, Takuya Yoshioka, Xiaofei Wang, **Peidong Wang**, "Self-Supervised Learning with Bi-Label Masked Speech Prediction for Streaming Multi-Talker Speech Recognition", in *Proc. of ICASSP*, 2023, to appear.

[11] Jian Xue*, **Peidong Wang***, Jinyu Li, Matt Post, Yashesh Gaur, "Large-Scale Streaming End-to-End Speech Translation with Neural Transducers", in *Proc. of INTERSPEECH*, 2022, pp. 3263-3267. (* denotes equal contribution.)

[10] **Peidong Wang**, Tara N. Sainath, Ron J. Weiss, "Multitask Training with Text Data for End-to-End Speech Recognition", in *Proc. of INTERSPEECH*, 2021, pp. 2566-2570.

[9] Zhong-Qiu Wang, **Peidong Wang**, DeLiang Wang, "Multi-Microphone Complex Spectral Mapping for Utterance-wise and Continuous Speaker Separation", *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, 2021, vol. 29, pp. 2001-2014.

[8] **Peidong Wang**, Zhuo Chen, DeLiang Wang, Jinyu Li, Yifan Gong, "Speaker Separation Using Speaker Inventories and Estimated Speech", *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, 2021, vol. 29, pp. 537-546.

[7] Zhong-Qiu Wang*, **Peidong Wang***, DeLiang Wang, "Complex Spectral Mapping for Single- and Multi-Channel Speech Enhancement and Robust ASR", *IEEE/ACM*

Transactions on Audio, Speech, and Language Processing (TASLP), 2020, vol. 28, pp. 1778-1787. (* denotes equal contribution.)

[6] **Peidong Wang**, Jia Cui, Chao Weng, Dong Yu, "Large Margin Training for Attention Based End-to-End Speech Recognition", in *Proc. of INTERSPEECH*, 2019, pp. 246-250.

[5] **Peidong Wang**, DeLiang Wang, "Enhanced Spectral Features for Distortion-Independent Acoustic Modeling", in *Proc. of INTERSPEECH*, 2019, pp. 476-480.

[4] **Peidong Wang**, Ke Tan, DeLiang Wang, "Bridging the Gap Between Monaural Speech Enhancement and Recognition with Distortion-Independent Acoustic Modeling", *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, 2020, vol. 28, pp. 39-48.

[3] **Peidong Wang**, Jia Cui, Chao Weng, Dong Yu, "Token-Wise Training for Attention Based End-to-End Speech Recognition", in *Proc. of ICASSP*, 2019, pp. 6276-6280.

[2] **Peidong Wang**, DeLiang Wang, "Filter-and-Convolve: A CNN Based Multichannel Complex Concatenation Acoustic Model", in *Proc. of ICASSP*, 2018, pp. 5564-5568.

[1] **Peidong Wang**, DeLiang Wang, "Utterance-Wise Recurrent Dropout and Iterative Speaker Adaptation for Robust Monaural Speech Recognition", in *Proc. of ICASSP*, 2018, pp. 4814-4818.

SELECTED PATENTS

[3] **Peidong Wang**, Jia Cui, Chao Weng, Dong Yu, "Token-Wise Training for Attention Based End-to-End Speech Recognition", US Patent 11037547, 2021.

[2] **Peidong Wang**, Jia Cui, Chao Weng, Dong Yu, "Large Margin Training for Attention Based End-to-End Speech Recognition", US Patent 10861441, 2020.

[1] Xiaoming Chen, Zhibo Chen, Xiaoyu Liu, Xiaoqian Mu, Linfeng Yu, **Peidong Wang**, "Wearable Device-Based Smart Personal Security System and Implementation Method Thereof", CN Patent 104900006, 2017.

SKILLS

Artificial Intelligence Related

- *Proficient:* PyTorch, TensorFlow, Kaldi, CNTK, Matlab, R, NumPy, Scikit-Learn, Pandas, Amazon Web Services (AWS)
- *Familiar:* Chainer, Hadoop, Spark, SciPy, CUDA, D3.js

Web and Mobile Application Development

- *Proficient:* Xcode, Ionic Framework, Sketch

Embedded Systems

- *Proficient:* PCB Design, Atmel AVR
- *Familiar:* VHDL, FPGA prototyping

Programming Languages and Miscs

- *Proficient:* Python, C/C++, Shell, Swift, SQL, LaTeX, Lisp, Delphi
- *Familiar:* Java, Perl, Assembly Language, Lua, Javascript, CSS, HTML, Mechanical Drawing and AutoCAD

SELECTED HONORS

ISCA Travel Grant for INTERSPEECH	2019
O'Donnell Fellowship	2015
Honorary Title *USTC Outstanding Graduates*	2015
HuaYu Scholarship	2014