

# Peidong Wang

Email: [peidong-wang@ieee.org](mailto:peidong-wang@ieee.org)  
Homepage: <http://www.peidongwang.com>

## INDUSTRIAL EXPERIENCE

- Microsoft** Bellevue, Washington, U.S.A.  
Senior Cognition and Speech Scientist  
Speech and Language Group  
June 2021 - Present
- Google** New York, New York, U.S.A.  
Research Intern  
May 2020 - Aug. 2020  
Topic: Semi-Supervised End-to-End Speech Recognition  
Mentors: Tara N. Sainath, Ron J. Weiss
- Microsoft** Redmond, Washington, U.S.A.  
Research Intern  
May 2019 - July 2019  
Topic: Speaker Separation for Meeting Transcription  
Mentors: Zhuo Chen, Jinyu Li, Yifan Gong
- Tencent AI Lab** Bellevue, Washington, U.S.A.  
Research Intern  
May 2018 - Aug. 2018  
Topics: End-to-End Speech Recognition  
Mentors: Jia Cui, Chao Weng, Dong Yu
- Elevoc Technology** Shenzhen, Guangdong, China  
Research Intern  
Dec. 2017 - Jan. 2018  
Topic: Keyword Spotting  
Mentor: Xueliang Zhang

## ACADEMIC PUBLICATIONS

- [15] **Peidong Wang**, DeLiang Wang, “Model Compression for End-to-End Speech Recognition”, *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, under review.
- [14] **Peidong Wang**, Tara N. Sainath, Ron J. Weiss, “Multitask Training with Text Data for End-to-End Speech Recognition”, in *Proc. of INTERSPEECH*, 2021, to appear.
- [13] 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, to appear.
- [12] **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.
- [11] 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.)
- [10] **Peidong Wang**, Zhuo Chen, Xiong Xiao, Zhong Meng, Takuya Yoshioka, Tianyan Zhou, Liang Lu, Jinyu Li, “Speech Separation Using Speaker Inventory”, in *Proc. of ASRU*, 2019, pp. 230-236.
- [9] **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.
- [8] **Peidong Wang**, Ke Tan, DeLiang Wang, “Bridging the Gap Between Monaural Speech Enhancement and Recognition with Distortion-Independent Acoustic Model-

ing”, in *Proc. of INTERSPEECH*, 2019, pp. 471-475.

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

[6] **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.

[5] Prashant Serai, **Peidong Wang**, Eric Fosler-Lussier, “Improving Speech Recognition Error Prediction for Modern and Off-the-Shelf Speech Recognizers”, in *Proc. of ICASSP*, 2019, pp. 7255-7259.

[4] **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.

[3] Jia Cui, Chao Weng, Guangsen Wang, Jun Wang, **Peidong Wang**, Chengzhu Yu, Dan Su, Dong Yu, “Improving Attention-Based End-to-End ASR Systems with Sequence-Based Loss Functions”, in *Proc. of SLT*, 2018, pp. 353-360.

[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

[2] **Peidong Wang**, Jia Cui, Chao Weng, Dong Yu, “Large Margin Training for Attention Based End-to-End Speech Recognition”, US Patent, Docket No. Q243987.

[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 (worldwide applications), 104900006, issued October 27, 2017.

## SKILLS

### Artificial Intelligence Related

- *Proficient*: TensorFlow, PyTorch, 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, L<sup>A</sup>T<sub>E</sub>X, Lisp, Delphi
- *Familiar*: Java, Perl, Assembly Language, Lua, Javascript, CSS, HTML, Mechanical Drawing and AutoCAD

## SELECTED HONORS

<i>ISCA Travel Grant for INTERSPEECH</i>	2019
<b>O’Donnell Fellowship</b>	2015
Honorary Title <i>USTC Outstanding Graduates</i>	2015
<b>HuaYu Scholarship</b>	2014