

Zhuohuang Zhang

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EDUCATION	Indiana University Bloomington <i>Doctor of Philosophy</i> Computer Science, Speech and Hearing Sciences Advisors: Prof. Donald S. Williamson , Prof. Yi Shen	Bloomington, IN 08/2017 - Present (05/2022 expected)
	University of Rochester <i>Master of Science</i> Electrical and Computer Engineering Advisor: Prof. Zhiyao Duan	Rochester, NY 08/2015 - 05/2017
	Beijing Institute of Technology <i>Bachelor of Engineering</i> Opto-Electrical Information Engineering	Beijing, China 08/2011 - 06/2015

PUBLICATIONS

- **Zhuohuang Zhang**, Donald S. Williamson Yi Shen (2020). *Investigation of Phase Distortion on Perceived Speech Quality for Hearing-impaired Listeners*. Interspeech 2020, Shanghai, China.
- **Zhuohuang Zhang**, Chengyun Deng, Yi Shen, Donald S. Williamson, Yongtao Sha, Yi Zhang, Hui Song and Xiangang Li (2020). *On Loss Functions and Recurrency Training for GAN-based Speech Enhancement Systems*. Interspeech 2020, Shanghai, China.
- **Zhuohuang Zhang**, Yi Shen (2019). *Listener Preference on the Local Criterion for Ideal Binary-Masked Speech* (oral). Interspeech 2019, Graz, Austria.
- **Zhuohuang Zhang**, Donald S. Williamson, Yi Shen (2019). *Impact of Amplification on Speech Enhancement Algorithms Using an Objective Evaluation Metric* (poster). ICA 2019, Aachen, Germany.
- **Zhuohuang Zhang**, Yi Shen, Donald S. Williamson (2019). *Objective Comparison of Speech Enhancement Algorithms with Hearing Loss Simulation* (poster). ICASSP 2019, Brighton, UK.
- Yi Shen, Celia Zhang, **Zhuohuang Zhang** (2018). *Feasibility of interleaved Bayesian adaptive procedures in estimating the equal-loudness contour*. The Journal of the Acoustical Society of America.
- Yong Song, Qun Hao, Yue liu, Tianle Tan, **Zhuohuang Zhang** (2014). *Design and Implementation of A Retina-like Imaging System Based on Non-uniform Lens Array*. International Symposium on Optoelectronic Technology and Application, SPIE.
- Qingsheng Luo, Zhongyang Xiao, Pan Lu, **Zhuohuang Zhang**, Lei Zhao (2014). *Mechanical Design and Kinematic Analysis of a Wearable Lumbodorsal Therapeutic Instrument*. Journal of Mechanical & Electrical Engineering.
- Zhen Tan, Lianfeng Zhao, Bolin Shan, Jing Wang, Jun Xu, **Zhuohuang Zhang** (2014). *Sulfur Passivation Enhancement for GaSb MOS Devices by Adding H₂O₂ to (NH₄)₂S Solution* (poster). IEEE SISC 2014, San Diego, USA.

INVITED TALKS AND POSTERS

- *Impact of phase distortion and phase-insensitive speech enhancement on speech quality perceived by hearing-impaired listeners*, 179th Meeting Acoustic Society of America, Chicago, IL, 2020.

- *Monaural Speech Enhancement with Convolutional Recurrent Generative Adversarial Networks* (guest lecture), CSCI-B659: Deep Learning for Speech Processing, Indiana University Bloomington, USA, 2019.
- *Impact of Amplification on Speech Enhancement Algorithms Using an Objective Evaluation Metric* (poster), ICA 2019, Aachen, Germany, 2019.
- *Inconsistencies between the predicted qualities of enhanced speech signals from two objective metrics*, 177th Meeting Acoustic Society of America, Louisville, KY, 2019.
- *Can listeners reliably identify their preferred amplification profiles for speech listening?* (poster), 177th Meeting Acoustic Society of America, Louisville, KY, 2019.

INTERNSHIP	Tencent, AI Lab	Bellevue, WA
	Research Intern, Mentors: Dr. Yong Xu , Dr. Dong Yu	05/2020 - 08/2020
	<ul style="list-style-type: none"> • Worked on single/multi-channel speech enhancement. 	
	DiDi Chuxing, AI Lab	Beijing, China
	Research Intern, Mentors: Dr. Hui Song, Dr. Xiangang Li	06/2019 - 08/2019
	<ul style="list-style-type: none"> • Designed and implemented a novel GAN-based speech enhancement algorithm in Tensorflow. • Implemented/Tested several state-of-the-art speech enhancement algorithms for comparison. • The proposed GAN model outperforms the other systems in terms of PESQ, STOI, CSIG, CBAK, and COVL. 	
	48th Research Institute, CETGC	Changsha, China
	Engineer Intern	07/2014 - 09/2014
AWARDS	€650 Travel Grant from ISCA for Interspeech 2019	07/2019
	\$500 Research Support Grant from IU SPHS department	02/2018
	Fellowship from IU SPHS department	09/2017
	20% Tuition Grant from UR ECE department	09/2015
COMPUTER SKILLS	Programming Languages: Python, MATLAB, C, Bash, PostgreSQL, R, \LaTeX Deep Learning Tools: Tensorflow, PyTorch, Keras	
GRADUATE COURSES	Computer Science: Machine Learning, Data Mining, Deep Learning: Speech Processing, Advanced Operating System, Algorithm Design and Analysis, Artificial Intelligence, Advanced Database Concepts Speech and Hearing Sciences: Auditory Anatomy & Physiology, Psychoacoustics, Bayesian Data Analysis, Speech Seminar, Hearing Seminar, Instrumentation Methods, Research & Ethics in Speech, Language, and Hearing Electrical Engineering: Audio Software Design, Digital Image Processing, Digital Signal Processing, Random Process, Audio Signal Processing, Digital Video Processing, Network Science Analytics	
EXPERIENCE	Research Assistant at IUB	08/2018 - Present
	Teaching Assistant at UR (ECE 472)	01/2017 - 05/2017
	Teaching Assistant at UR (ECE 241)	09/2016 - 12/2016
	Research Assistant at UR	05/2016 - 05/2017