

ZHENYU TANG

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EDUCATION

University of Maryland - College Park

PhD in Computer Science, supervised by **Dinesh Manocha**

Received Dean's Fellowship in 2018 and 2019, GPA: 3.7/4.0

College Park, MD, USA

2018 – 2022

Zhejiang University (Chu Kochen Honors College)

Bachelor in Engineering (**with Honor**), Opto-Electronic Science and Engineering

Cumulative GPA: 3.73/4.0, Major GPA: 3.83/4.0 (top 5%)

Hangzhou, Zhejiang, China

2013 – 2017

PROFESSIONAL EXPERIENCE

TikTok (ByteDance)

Full-time Research Scientist in Speech, Audio & Music Intelligence

San Jose, CA

June 2022 – Current

Amazon Lab126

Research Intern in Audio Data Engineering

San Jose, CA

July 2021 – Oct. 2021

- Propose novel methods for generating high-quality acoustic training data
- Coordinate cross-team collaboration for enhancing internal data tools

Facebook Reality Labs

Research Intern in Audio Team

Redmond, WA

May 2020 – Oct. 2020

- Developed efficient algorithms for acoustic simulation with custom microphone arrays
- Built pipeline for training speech models with synthetic data which contributed to a publication

Adobe Systems

Creative Intelligence Lab Intern in Audio Group

Seattle, WA

May 2019 – Sept. 2019

- Devised novel user-friendly methods for synthesizing realistic virtual sound in augmented reality, published a research paper and filed a patent for our original algorithm
- Integrated our learning-based acoustic analyzer as part of Adobe's Sensei cloud AI framework

ACADEMIC SERVICES

I served as a reviewer and meta-reviewer in the Senior Program Committee (SPC) for the **AAAI 2023 Conference on Artificial Intelligence**. I also served as a reviewer for

- Eurographics 2022
- International Symposium on Mixed and Augmented Reality (ISMAR) Journal track 2022
- SIGGRAPH 2020, SIGGRAPH Asia 2021
- The IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR) 2020 and 2021
- Transactions on Audio, Speech and Language Processing (TASLP) 2021
- Acta Acustica Journal 2020, 2021
- IEEE Transactions on Multimedia 2020
- Journal of the Acoustical Society of America (JASA) 2020

TECHNICAL STRENGTHS

Programming: C/C++, Python, Matlab, R, bash scripting

Software and Tools: Docker/Singularity, Pytorch, TensorFlow, Blender, pybind11

PATENTS

- Generating Scene-Aware Audio using a Neural Network-Based Acoustic Analysis*** 2022
Zhenyu Tang, Dingzeyu Li, Nicholas J. Bryan, Timothy R. Langlois
- Scene-aware Far-Field Automatic Speech Recognition*** 2022
Zhenyu Tang, Dinesh Manocha

SELECTED PUBLICATIONS

- MESH2IR: Neural Acoustic Impulse Response Generator for Complex 3D Scenes***
Anton Ratnarajah, **Zhenyu Tang**, Rohith Aralikatti, Dinesh Manocha
Proceedings of the 2022 ACM on Multimedia Conference. ACM, 2022
- GWA: A Large High-Quality Acoustic Dataset for Audio Processing***
Zhenyu Tang, Rohith Aralikatti, Anton Ratnarajah, Dinesh Manocha
SIGGRAPH 2022 Conference Proceedings
- FAST-RIR: Fast Neural Diffuse Room Impulse Response Generator***
Anton Ratnarajah, Shi-Xiong Zhang, Meng Yu, **Zhenyu Tang**, Dinesh Manocha, Dong Yu
International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2022
- IR-GAN: Room Impulse Response Generator for Speech Augmentation***
Anton Ratnarajah, **Zhenyu Tang**, Dinesh Manocha
INTERSPEECH 2021
- Learning Acoustic Scattering Fields for Dynamic Interactive Sound Propagation***
Zhenyu Tang, Hsien-Yu Meng, Dinesh Manocha
IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR) 2021
- Low-frequency Compensated Synthetic Impulse Responses for Improved Far-field Speech Recognition***
Zhenyu Tang, Hsien-Yu Meng, Dinesh Manocha
International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2020
- Improving Reverberant Speech Training using Diffuse Acoustic Simulation***
Zhenyu Tang, Lianwu Chen, Bo Wu, Dong Yu, Dinesh Manocha
International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2020
- Scene-Aware Audio Rendering via Deep Acoustic Analysis***
Zhenyu Tang, Nicholas J. Bryan, Dingzeyu Li, Timothy R. Langlois, Dinesh Manocha
IEEE VR 2020 Journal, Transactions on Visualization and Computer Graphics (TVCG)
- Regression and Classification for Direction-of-Arrival Estimation with Convolutional Recurrent Neural Networks***
Zhenyu Tang, John D. Kanu, Kevin Hogan, Dinesh Manocha
INTERSPEECH 2019
- LightPainter: Creating Long Exposure Imagery from Videos***
Yi-Ling Chen, **Zhenyu Tang**, Kwan-Liu Ma
IEEE computer graphics and applications 38, no. 4 (2018)

Full publication list at <https://scholar.google.com/citations?user=gPGVGTkAAAAJ&hl=en&oi=ao>