

ZHENYU TANG

Greenbelt, MD 20770 ♦ zhy@umd.edu ♦ (404) 200-4217 ♦ <https://github.com/RoyJames>

EDUCATION

University of Maryland - College Park

PhD candidate 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 (expected)

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

Amazon Lab126

Research Intern in Audio Data Engineering

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

San Jose, CA

July 2021 – Oct. 2021

Facebook Reality Labs

Research Intern in Audio Team

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

Redmond, WA

May 2020 – Oct. 2020

Adobe Systems

Creative Intelligence Lab Intern in Audio Group

- 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

Seattle, WA

May 2019 – Sept. 2019

ACADEMIC SERVICES

I served as a reviewer for

- Eurographics 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, Kaldi, Blender, Qt

Miscellaneous: LaTeX, pybind11, OpenGL/CV, GLSL

PATENTS

Rendering Scene-Aware Audio Using Neural Network-Based Acoustic Analysis

Patent Filed, 2019

Zhenyu Tang, Dingzeyu Li, Nicholas J. Bryan, Timothy R. Langlois

SELECTED PUBLICATIONS

Improving Reverberant Speech Separation With Synthetic Room Impulse Responses

Rohith Aralikatti, Anton Ratnarajah, **Zhenyu Tang**, Dinesh Manocha
IEEE Automatic Speech Recognition and Understanding Workshop (ASRU) 2021

Online Self-Attentive Gated RNNs for Real-Time Speaker Separation

Ori Kabeli¹, Yossi Adi¹, **Zhenyu Tang**, Buye Xu, Anurag Kumar
Workshop on Machine Learning in Speech and Language Processing 2021

IR-GAN: Room Impulse Response Generator for Speech Augmentation

Anton Ratnarajah, **Zhenyu Tang**, Dinesh Manocha
INTERSPEECH 2021

Point-based Acoustic Scattering for Interactive Sound Propagation via Surface Encoding

Hsien-Yu Meng, **Zhenyu Tang**, Dinesh Manocha
30th International Joint Conference on Artificial Intelligence (IJCAI 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

Receiver Placement for Speech Enhancement using Sound Propagation Optimization

Nicolas Morales, **Zhenyu Tang**, Dinesh Manocha
Applied Acoustics Volume 155, Pages 53-62

Dynamic Sound Field Synthesis for Speech and Music Optimization

Zhenyu Tang, Nicolas Morales, Dinesh Manocha
Proceedings of the 2018 ACM on Multimedia Conference. ACM, 2018

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>