

# ZHENYU TANG

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## EDUCATION

### **University of Maryland - College Park**

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

College Park, MD, USA

2018 – 2022 (expected)

### **Zhejiang University** (Chu Kochen Honors College)

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

Hangzhou, Zhejiang, China

2013 – 2017

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

## RESEARCH INTERESTS

Computer graphics, Audio-visual system, Virtual/Augmented reality, Machine intelligence, Speech technology

## WORK EXPERIENCE

### **Amazon Lab126**

*Research Intern in Audio Data Engineering*

San Jose, CA

July 2021 – Present

### **Facebook Reality Labs**

*Research Intern in Audio Team*

Seattle, WA

May 2020 – Oct. 2020

### **Adobe Systems**

*Creative Intelligence Lab Intern in Audio Group*

Seattle, WA

May 2019 – Sept. 2019

## SELECTED PUBLICATIONS

### ***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)*

**MANUSCRIPTS**

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

Ori Kabeli1, Yossi Adi1, **Zhenyu Tang**, Buye Xu, Anurag Kumar  
*arXiv preprint arXiv:2106.13493 (2021)*

***Scene-aware Far-field Automatic Speech Recognition***

**Zhenyu Tang**, Dinesh Manocha  
*arXiv preprint arXiv:2104.10757 (2021)*

**ACADEMIC SERVICES**

I served as a reviewer for

- SIGGRAPH 2020, SIGGRAPH Asia 2021
- The IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR) 2020 and 2021
- Acta Acustica Journal 2020, 2021
- IEEE Transactions on Multimedia 2020
- Journal of the Acoustical Society of America (JASA) 2020

**PATENTS**

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

Patent Filed, 2019

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

**TECHNICAL STRENGTHS**

- **Programming:** C/C++, Python, Matlab, R, bash scripting
- **Software and Tools:** Pytorch, TensorFlow, Kaldi, Blender, Qt
- **Miscellaneous:** LaTeX, parallel computing, OpenGL/CV, GLSL