

# 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

Aug. 2018 – Present (2022 expected)

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

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

Hangzhou, Zhejiang, China

Sept. 2013 – Jul. 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

### **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

## PUBLICATIONS

### ***Learning Acoustic Scattering Fields for Dynamic Interactive Sound Propagation***

**Zhenyu Tang**, Hsien-Yu Meng, Dinesh Manocha

Jan. 2021

*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

Jan. 2020

*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

Jan. 2020

*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

Nov. 2019

*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

Sept. 2019

*Proceedings of INTERSPEECH 2019*

### ***Receiver Placement for Speech Enhancement using Sound Propagation Optimization***

Nicolas Morales, **Zhenyu Tang**, Dinesh Manocha

Dec. 2019

*Applied Acoustics Volume 155, Pages 53-62*

### ***Dynamic Sound Field Synthesis for Speech and Music Optimization***

**Zhenyu Tang**, Nicolas Morales, Dinesh Manocha

Oct. 2018

*Proceedings of the 2018 ACM on Multimedia Conference. ACM, 2018*

***Noise Field Control using Active Sound Propagation and Optimization***

**Zhenyu Tang**, Dinesh Manocha

Sept. 2018

*Acoustic Signal Enhancement (IWAENC), 2018 IEEE International Workshop on. IEEE, 2018*

***LightPainter: Creating Long Exposure Imagery from Videos***

Yi-Ling Chen, **Zhenyu Tang**, Kwan-Liu Ma

Jul. 2018

*IEEE computer graphics and applications* 38, no. 4 (2018)

***HeadPager: Page Turning with Computer Vision based Head Interaction***

**Zhenyu Tang**, Chenyu Yan, Sijie Ren, Huagen Wan

Sept. 2016

*13th Asian Conference on Computer Vision (ACCV'16)*

**MANUSCRIPTS**

***IR-GAN: Room Impulse Response Generator for Speech Augmentation***

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

arXiv:2010.13219

**ACADEMIC SERVICES**

I served as a reviewer for

- 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