ZHENYU TANG

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EDUCATION

University of Maryland - College Park College Park, MD, USA
PhD candidate in Computer Science, supervised by **Dinesh Manocha** 2018 – 2022 (expected)
Received Dean's Fellowship in 2018 and 2019, GPA: 3.7/4.0

Zhejiang University (Chu Kochen Honors College) Hangzhou, Zhejiang, China
Bachelor in Engineering (**with Honor**), Opto-Electronic Science and Engineering 2013 – 2017
Cumulative GPA: 3.73/4.0, Major GPA: 3.83/4.0 (top 5%)

PROFESSIONAL EXPERIENCE

Amazon Lab126 San Jose, CA
Research Intern in Audio Data Engineering July 2021 – Present
- Propose novel methods for generating high-quality acoustic training data
- Coordinate cross-team collaboration for enhancing internal data tools

Facebook Reality Labs Redmond, WA
Research Intern in Audio Team 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 Seattle, WA
Creative Intelligence Lab Intern in Audio Group 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 for
- 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