

ZHENYU TANG

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EDUCATION

University of Maryland - College Park

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

College Park, MD, USA

Aug. 2018 – Present

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

Sept. 2013 – Jul. 2017

RESEARCH INTERESTS

Machine intelligence; Speech systems; Audio-visual system; Computer graphics; Virtual/Augmented reality; Human-Computer Interaction

EXPERIENCE

Research Assistant (Speech dereverberation for ASR, synthetic dataset, audio CRNN learning)

University of Maryland Institute for Advanced Computer Studies (UMIACS), UMD

Aug. 2018 – Present

- Utilized environment information for sound propagation to perform speech dereverberation as an optimization problem
- Developed the first large synthetic Impulse Response dataset *SynIR*: <http://gamma.cs.unc.edu/Speech/SynIR/>
- (ongoing) Performing stacked CRNN training on large synthetic dataset for robust Direction of Arrival estimation

Research Assistant (Dynamic Sound Field Manipulation, Acoustic Optimization)

Geometric Algorithms for Modeling, Motion, and Animation (GAMMA) group, UNC-Chapel Hill

Oct. 2017 – Jul. 2018

- Formulated a novel algorithm for flexibly manipulating local dynamic sound field
- Integrated a hybrid sound propagation framework using geometric ray tracer and wave-based simulators
- Provided quantitatively and qualitatively better solutions to *Speech & Music Improvement*, and *Noise Control*

Summer Research Intern (High-dimensional Data Embedding and Visualizing in Virtual Reality)

Visualization and Interface Design Innovation Labs (VIDI), UC Davis

Jul. 2016 – Sept. 2016

- Derived original formulations for multidimensional data scaling on Riemannian manifolds
- Implemented optimization algorithm for embedding high-dimensional data on 3-D spherical surfaces
- Launched the data visualization platform in virtual reality environment using Unreal Engine

PUBLICATIONS

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)

TECHNICAL STRENGTHS

- **Programming:** C/C++, Python, Matlab, R, bash scripting, Swift
- **Software and Tools:** Pytorch/tensorflow, Unreal Engine 4, Blender, Qt, Solidworks
- **Miscellaneous:** LaTeX, parallel computing, OpenGL/CV, GLSL