

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)

B.E. in Opto-Electronics Information Science and Engineering (top 5%, **with Honor**)

Hangzhou, Zhejiang, China

Sept. 2013 – Jul. 2017

RESEARCH INTERESTS

Computer graphics, Audio-visual system, Virtual/Augmented reality, Machine intelligence, Human-Computer Interaction

EXPERIENCE

Dynamic Sound Field Manipulation, Acoustic Optimization, and Speech Dereverberation

Research Assistant, GAMMA group, UNC-Chapel Hill

Dec. 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 new solutions to *Speech Improvement*, *Music Enhancement*, and *Noise Cancellation*
- Developed the first large synthetic Impulse Response dataset *SynIR*: <http://gamma.cs.unc.edu/Speech/SynIR/>

Uncontrolled Simultaneous Appearance Acquisition based on Differential Stereo

Research Intern, Graphics and Parallel System Lab (CAD&GAPS), Zhejiang University

Dec. 2016 – May 2017

- Derived original formulation for acquiring general BRDF under uncontrolled environments
- Implemented optimization framework for differential image input to refine model mesh and BRDF simultaneously
- Tested algorithm in experiment using a consumer digital camera with satisfactory results precision

Embedding and Visualizing High-dimensional Data on Spherical Surface in Virtual Reality

Research Intern, 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 corresponding 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, Java, R, Swift, Pascal, Verilog
- **Software and Tools:** Pytorch/tensorflow, Unreal Engine 4, Blender, Qt, Solidworks
- **Miscellaneous:** LaTeX, parallel computing, OpenGL/CV, GLSL, bash scripting