ZHENYU TANG

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EDUCATION

University of Maryland - College Park — College Park, MD, USA
PhD in Computer Science, supervised by **Dinesh Manocha** — Aug. 2018 – Present

Zhejiang University (Chu Kochen Honors College) — Hangzhou, Zhejiang, China
Bachelor in Engineering (**with Honor**), Opto-Electronic Science and Engineering — 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, Human-Computer Interaction

EXPERIENCE

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 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/

Research Student (Uncontrolled Simultaneous Appearance Acquisition, Differential Stereo)
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

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 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, R, Swift, Verilog
- **Software and Tools**: Pytorch/tensorflow, Unreal Engine 4, Blender, Qt, Solidworks
- **Miscellaneous:**, LaTex, parallel computing, OpenGL/CV, GLSL, bash scripting