ZHENYU TANG

Greenbelt, MD 20770 ♦ zytang@cs.unc.edu ♦ (404) 200-4217 ♦ Site: http://www.cs.umd.edu/~zhy

EDUCATION

University of Maryland - College Park — College Park, MD, USA
PhD (continued) in Computer Science, supervised by **Dinesh Manocha** — Aug. 2018 – May. 2022 (expected)

University of North Carolina - Chapel Hill — Chapel Hill, NC, USA
PhD (1st year) in Computer Science, supervised by **Dinesh Manocha** — Aug. 2017 – Aug. 2018

Zhejiang University (Chu Kochen Honors College) — Hangzhou, Zhejiang, China
B.E. in Opto-Electronics Information Science and Engineering (**with Honor**) — Sept. 2013 – Jul. 2017
Cumulative GPA: 3.73/4.0, **Major GPA**: 3.83/4.0 (top 5%)

RESEARCH INTERESTS

Computer Graphics, Virtual/Augmented Reality, Human-Computer Interaction, Machine Intelligence, Inverse Problems

RESEARCH EXPERIENCE

Dynamic Sound Field Manipulation using Acoustic Optimization
GAMMA group, UNC-Chapel Hill, USA — Dec. 2017 – Jun. 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*

Uncontrolled Simultaneous Appearance Acquisition based on Differential Stereo
Graphics and Parallel System Lab (CAD&GAPS), Zhejiang University, China — 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
Visualization and Interface Design Innovation Labs (VIDI), UC Davis, USA — 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 — (to appear) 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 — (to appear) 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, Swift, Matlab, Java, R, Pascal, Verilog
- **Software and Tools**: LaTeX, Unreal Engine 4, Blender, Qt, Solidworks
- **Miscellaneous:** Pytorch/tensorflow, parallel computing, OpenGL/CV, GLSL, bash scripting