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, Speech technology

RESEARCH 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 quantitatively and qualitatively better solutions to *Speech* & *Music Improvement*, and *Noise Control*
- 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 my algorithm using a conventional digital camera setting with reconstruction RMS error less than 0.02m

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

WORK EXPERIENCE

Adobe Systems — Seattle, WA
Creative Intelligence Lab Intern in Audio Group — May 2019 – Aug. 2019

PUBLICATIONS

Regression and Classification for Direction-of-Arrival Estimation with Convolutional Recurrent Neural Networks
Zhenyu Tang, John D. Kanu, Kevin Hogan, Dinesh Manocha — Sept. 2019
Proceedings of INTERSPEECH 2019

Receiver placement for speech enhancement using sound propagation optimization
Nicolas Morales, **Zhenyu Tang**, Dinesh Manocha — Dec. 2019
Applied Acoustics Volume 155, Pages 53-62

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