Duotun Wang

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https://github.com/duotun

EDUCATION

University of Maryland *College Park, MD*
M.S. in Computer Science ‖ GPA: 4.0/4.0 Expected Graduation: May. 2021
Onging Courses: Advanced Computer Graphics, Deep Learning, Advanced Numerical Optimization

Beijing Institute of Technology *Beijing, China*
B.S. in Computer Science & Technology (Top 5%) ‖ GPA: 3.69/4.0 Sep. 2015 - Jun. 2019

PUBLICATION

- **Wang, D.**, Kubrlcht, J., Zhu, Y., Lianq, W., Zhu, S. C., Jiang, C., & Lu, H. (2018, March). Spatially Perturbed Collision Sounds Attenuate Perceived Causality in 3D Launching Events. In 2018 IEEE Conference on Virtual Reality and 3D User Interfaces (VR) (pp. 259-266). IEEE.

WORK EXPERIENCE

Seat Plus: A Smart Chair for the Good Sitting Posture Mar. 2019 - July. 2019
Research Intern, Lenovo Research *Beijing, China*

- Worked on real-time pressure data (from Arduino to Unity) of sitting posture visualization.
- Built a mobile app for animated multimodality reminders to improve sitting postures.
- Analyzed human being's sitting postures based on delicately designed user study.
- Utilized Decision Tree in Python to efficiently classify different sitting postures based on pressure data.

Interactive Design for Simulated Windshield Displays in Cars Oct. 2018 - Dec. 2018
Research Intern, BMW *Beijing, China*

- Simulated innovative keyboards based on touch-pads of Vive Controllers for human-to-car interactions.
- Created virtual experiences of car use cases with Vive Pro, Leap Motion, and HUD.
- Applied self-developed shaders with bump mapping into animated scenes.

RESEARCH EXPERIENCE

Clothes Folding Task with Physics-based Simulation Jun. 2018 - Aug. 2018
Summer Research Student, University of Pennsylvania *Philadelphia, PA*

- Extended simulation for clothes-folding tasks into virtual environments.
- Animated grabbing effects of clothes with the utilization of k-d tree in C#.
- Designed semi-autonomous clothes-folding tasks for further robots' learning.

Perceived Causality in 3D Launching Event Jul. 2017 - Aug. 2017
Summer Research Student, University of Pennsylvania *Philadelphia, PA*

- Built causal experiments about spatiotemporal cognition in virtual environments.
- Simulated rigid-body dynamics with collision sound in Unity.
- Developed subdivision surface methods in Java.

PROJECT

Interactive Sound Synthesis Sep. 2019 - Dec. 2019
Course: Physically-Based Simulation *College Park, MD*

- Utilized Mass-Spring-System methods to discretize object mesh and produce sinusoidal sound waves.
- Integrated Accelerating technology for real-time sound simulation into Unity.

Composition of Multi-Exposure Images Sep. 2017 - Dec. 2017
Course: Image Processing Technology *Beijing, China*

- Implemented gradient-guided methods of image composition based on OpenCV using C++.
- Applied the self-developed Gaussian Filter to smooth the drastic gradient changes on edges of images.

SKILLS

Programming Languages C/C++, C#, Python, MATLAB, GLSL, Java, JavaScript
Tools Unity, OpenGL, LaTex, Unreal Engine