

Haikun Huang

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BIO

My research interests include AR/VR/MR, computational design, graphics, HCI, and vision, particularly on the applications of artificial intelligence techniques for creating novel 3D content creation tools and virtual experiences. My research has been published in IEEE VR and ACM CHI; and was recognized with a Best Paper Honorable Mention Award at CHI 2019. I frequently serve as a reviewer for IEEE VR and CASA. I also have years of experience working in the game industry and serving as a columnist for popular game development forums in China such as Manew and Taikr.

RESEARCH INTERESTS

XR, computational design, graphics, HCI, and vision, particularly on the applications of artificial intelligence techniques for creating novel 3D content creation tools and virtual experiences.

EDUCATION

Ph.D., Computer Science , Uni of Mass Boston	2016-2020
Bachelor, Computer Science , Uni of Mass Boston	2012-2016
Bachelor, E-Commerce , South China University of Technology	2006-2008
Application Development , South China Institute of Software Engineering GZU	2003-2006

WORKING/TRAINING EXPERIENCE

Postdoctoral Research Fellow , George Mason Uni.	2020-Present
Research/Teaching Assist , Uni of Mass Boston.	2017-2020
2D,3D Game Programming. , The Beijing Gamfe Tech co.,LTD.	2009-2011
Data Analysis Engineer , Guangzhou Kingpoint CO.,LTD.	2008-2009

AWARDS/HONORS & PATENTS

Best Paper Honorable Mention Award (CHI 2019)	2019
Human Vision-Empowered 3D Scene Analysis Tools	2018
- Haikun Huang, Lap-Fai Yu	
- US patent application no. 16/598, 718	

PROFESSIONAL ACTIVITIES

Co-Organizer, *1st Workshop on 3D Content Creation for Simulated Training in Extended Reality (TrainingXR)*, IEEE VR 2020.

Reviewer, *ERGON 2020, JOVE 2020, IEEE Game CHI 2020, IEEE VR Conference Papers 2020, CHI Paper 2020, CASA 2019, ISMAR Paper & Poster 2020, VRST 2020 Conference Paper, VRST 2020 Poster & Demo, ACHI 2020, IEEE VR 2021, Frontiers 2020, Editorial 2020, CHI 2021, IEEE VR 2021 Conference.*

Technical Program Committees, *ACHI 2020.*

SELECTED PUBLICATIONS

10+ publications in top-tier computer graphics, vision, human-computer interaction conferences and journals (e.g., CHI, IEEE VR, TVCG, ICRA, SIGGRAPH Asia, Technical Heal Care, Medicine and Science in Sports and Exercise)

- Toward Automatic Audio Description Generation for Accessible Videos (CHI 2020)
- Interactive Design of Gallery Walls via Mixed Reality (IEEE AIVR, 2020)
- Exertion-Aware Path Generation (SIGGRAPH 2020)
- Audible Panorama: Automatic Spatial Audio Generation for Panorama Imagery (CHI 2019)
- Gaze-driven Adaptive Aid for VR Navigation (CHI 2019)
- Optimizing Visual Element Placement via Visual Attention Analysis (IEEE VR 2019)
- Pose-Guided Level Design (CHI 2019)
- Exercise Intensity-driven Level Design (Special Issue on IEEE Virtual Reality 2018)
- Deep Trail-Following Robotic Guide Dog in Pedestrian Environments for People who are Blind and Visually Impaired - Learning from Virtual and Real Worlds (ICRA 2018)
- Automatic Optimization of Wayfinding Design (TVCG 2017)
- Analyzing Visual Attention via Virtual Environments (Virtual Reality meets Physical Reality Workshop SIGGRAPH Asia, 2016)
- Physiological Responses and Enjoyment of Kinect-Based Exergames in Older Adults at Risk for Falls: A Feasibility Study (Manuscript under review at Medicine and Science in Sports and Exercise)
- Effects of Exergaming on Cognition and Dual-Task Mobility in Older Adults at Risk for Falling (Manuscript under review at Medicine and Science in Sports and Exercise)