

Visiting Assistant Professor
Dept. of Computer Science and Engineering
University of South Florida (USF), Tampa, FL, USA
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RESEARCH INTERESTS

Computer Graphics (CG), Virtual Reality (VR), Augmented Reality (AR), Augmented Virtuality (AV), e-Edutainment, e-Learning, Computational Design, Procedural Modeling, Scientific Simulation, Deep Learning, Sketch-Based Interface, Text-Based Interface.

EDUCATIONS

George Mason University (GMU)

Fairfax, USA

Ph.D., Computer Science

Graduated in 08/2021

- **Overall GPA:** 3.69/4.0, **Grade:** A-;
- **Thesis:** Personalizing VR Training Experiences through Optimization

University of Central Florida (UCF)

Orlando, USA

MS.Eng., Computer Science

Graduated in 05/2016

- **Ray Tracing:** 97.6/100.0, **Grade:** A;
- **Computer Graphics:** 95.56/100.0, **Grade:** A;

Harbin Institute of Technology (HIT)

Harbin, CHINA

B.Eng., Computer Science

Graduated in 07/2014

- **TOEFL:** R 24, S 20, L 19, W 24, Total 87;
- **GRE:** V 154 (62%below), Q 161 (81%below), AW 3.0 (14%below).

PUBLICATIONS

- **Wanwan Li**, Changyang Li, Minyoung Kim, Haikun Huang, Lap-Fai Yu. Location-Aware Adaptation of Augmented Reality Narratives. ACM CHI Conference on Human Factors in Computing Systems (ACM CHI 2023)
- **Wanwan Li**. Terrain Synthesis for Treadmill Exergaming in Virtual Reality. IEEE Workshop on VR for Exergaming (VR4Exergame @ IEEE VR 2023)
- **Wanwan Li**. Elliptical4VR: An Interactive Exergame Authoring Tool for Personalized Elliptical Workout Experience in VR. International Conference on Machine Learning and Human-Computer Interaction (MLHMI 2023)
- **Wanwan Li**. Patch-based Monte Carlo Terrain Upsampling via Gaussian Laplacian Pyramids. International Conference on Image, Video and Signal Processing (IVSP 2023)
- **Wanwan Li**. PlanetTXT: A Text-based Planetary System Simulation Interface for Astronomy Edutainment. International Conference on E-Education, E-Business, E-Management, and E-Learning (IC4E 2023)
- **Wanwan Li**. Simulating Quantum Turing Machine in Augmented Reality. International Conference on Multimedia and Image Processing (ICMIP 2023)
- Mohamed Al Hamzy, Shijin Zhang, Hong Huang, **Wanwan Li**. Creative NFT-Copyrighted AR Face Mask Authoring Using Unity3D Editor. International Conference on E-Commerce, E-Business and E-Government (ICEEG 2023)
- Devin Perry, Thomas Bivins, Bianca Dehaan, **Wanwan Li**. Procedural Rhythm Game Generation in Virtual Reality. International Conference on Image and Graphics Processing (ICIGP 2023)
- Dong Jun Kim, **Wanwan Li**. A View Direction-Driven Approach for Automatic Room Mapping in Mixed Reality. International Conference on Image Processing and Machine Vision (IPMV 2023)

- Vighnesh Gholap, **Wanwan Li**. Past, Present, and Future of the Augmented Reality (AR)-Enhanced Interactive Techniques- A Survey. International Conference on Machine Vision and Information Technology (CMVIT 2023)
- Geonhee Choi, **Wanwan Li**. Prevailing Technologies Augmented Reality Software with Hardware for E-Entertainment and E-Learning Purposes: A Survey. International Conference on Computer Science, Engineering and Education (CSEE 2023)
- **Wanwan Li**. PM4VR: A Scriptable Parametric Modeling Interface for Conceptual Architecture Design in VR. ACM SIGGRAPH International Conference on Virtual-Reality Continuum and its Applications in Industry (ACM SIGGRAPH VRCAI 2022) *Best Paper Award*
- **Wanwan Li**. Simulating Skydiving Experience in Virtual Reality. IEEE International Conference on Virtual Reality and Visualization (ICVRV 2022) *Best Paper Award*
- **Wanwan Li**. Creative Molecular Model Design for Chemistry Edutainment. International Conference on Education Technology and Computers (ICETC 2022)
- **Wanwan Li**. Procedural Marine Landscape Synthesis for Swimming Exergame in Virtual Reality. IEEE CTSoc International Conference on Games, Entertainment & Media (IEEE GEM 2022)
- **Wanwan Li**. Simulating Ice Skating Experience in Virtual Reality. International Conference on Image, Vision, and Computing (ICIVC 2022)
- **Wanwan Li**. Animaton: Scriptable Finite Automaton for Animation Design in Unity3D Game Engine. International Conference on Computer Graphics Digital Image Processing (CGDIP 2022)
- **Wanwan Li**. Simulating Virtual Construction Scenes on OpenStreetMap. International Conference on Virtual and Augmented Reality Simulations (ICVARS 2022)
- Changyang Li, **Wanwan Li**, Haikun Huang, Lap-Fai Yu. Interactive Augmented Reality Storytelling Guided by Scene Semantics. ACM Transactions on Graphics (Proceeding of SIGGRAPH 2022)
- **Wanwan Li**, Behzad Esmaeili, Lap-Fai Yu. Simulating Wind Tower Construction Process for Virtual Construction Safety Training and Active Learning. IEEE Workshop on 3D Content Creation for Simulated Training in eXtended Reality (TrainingXR @ IEEE VR 2022)
- **Wanwan Li**, Haikun Huang, Tomay Solomon, Behzad Esmaeili, Lap-Fai Yu. Synthesizing Personalized Construction Safety Training Scenarios for VR Training. IEEE Transactions on Visualization and Computer Graphics (TVCG 2022)
- **Wanwan Li**. Multi-View NURBS Volume. International Conference on Computer Graphics Theory and Applications (GRAPP 2022)
- **Wanwan Li**. Musical Instrument Performance in Augmented Virtuality. International Conference on Computer Graphics and Virtuality (ICCGV 2022)
- **Wanwan Li**. AnimalDraw: Drawing Animal Cardboard Toys Design for Children's Art Education and Entertainment. World Symposium on Software Engineering (WSSE 2022)
- **Wanwan Li**. Simulating Turing Machine in Augmented Reality. International Conference on Computational Science and Computational Intelligence (CSCI 2022)
- **Wanwan Li**. Make Uber Faster: Automatic Optimization of Uber Schedule Using OpenStreetMap Data. International Conference of Eurasia Graphics (EAG 2021)
- **Wanwan Li**. Pen2VR: A Smart Pen Tool Interface for Wire Art Design in VR. Smart Tools and Applications in Graphics (STAG 2021)
- **Wanwan Li**. Make OS Home: Home-Like Operating System in Virtual Reality. XR-Driven Digital Transformation of Design, Training, and Education (DigitalXR 2021)
- **Wanwan Li**. IslandPaint: Digital Painting Floating Island Design. Advances on Societal Digital Transformation (DIGITAL 2021)
- **Wanwan Li**. Procedural Modeling of the Great Barrier Reef. International Symposium on Visual Computing (ISVC 2021)
- **Wanwan Li**. Fast Fluid Thermodynamics Simulation by Solving Heat Diffusion Equation. International Journal of Computer Graphics & Animation (IJCGA 2021)
- Kelian Li, **Wanwan Li**. MusicTXT: A Text-based Interface for Music Notation. Ubiquitous Music Conference (Ubimus 2021)

- Biao Xie, Huimin Liu, Rawan Alghofaili, Yongqi Zhang, Yeling Jiang, Flavio Destri Lobo, Changyang Li, **Wanwan Li**, Haikun Huang, Mesut Akdere, Christos Mousas and Lap-Fai Yu. A Review on Virtual Reality Skill Training Applications. *Frontiers in Virtual Reality* (Front. VR 2021)
- **Wanwan Li**. Image Synthesis and Editing with Generative Adversarial Networks (GANs): A Review. *World Conference on Smart Trends in Systems Security and Sustainability* (WorldS4 2021)
- **Wanwan Li**, Biao Xie, Yongqi Zhang, Haikun Huang, Elisa Ogawa, Tongjian You, Lap-Fai Yu. Exertion-Aware Path Generation. *ACM Transactions on Graphics* (Proceeding of SIGGRAPH 2020)
- **Wanwan Li**, Javier Talavera, Amilcar Gomez Samayoa, Jyh-Ming Lien, Lap-Fai Yu. Automatic Synthesis of Virtual Wheelchair Training Scenarios. *IEEE Conference on Virtual Reality and 3D User Interfaces* (IEEE VR 2020)
- Yujia Wang, Wei Liang, **Wanwan Li**, Dingzeyu Li, Lap-Fai Yu. Scene-Aware Background Music Synthesis. *ACM Multimedia* (ACM MM 2020)
- **Wanwan Li**. The Implementation of Image Quilting Based Texture Synthesis Algorithm in Java Language[J]. *Journal of Qiqihar University (Natural Science Edition)*, 2014, Vol.30 No.2:48-52.
- **Wanwan Li**. The Principles and Implementation of Solar System Simulation Based on Java3D[J]. *Natural Science Journal of Harbin Normal University*, 2013, Vol.29 No.6:53-56.
- **Wanwan Li**. The Principal and Implementation of Action Recognition Based on Chessboard-Tree Algorithm[J]. *CC News*, 2013(12):141-126.

RESEARCH EXPERIENCES

Department of Computer Science, GMU

Fairfax, USA

Ph.D. Research

01/2019-08/2021

Academic Advisor: Craig Yu / Assistant Professor

- Personalizing VR Training Experiences through Optimization

Department of Civil Engineering, GMU

Fairfax, USA

Summer Research

05/2020-08/2020

Supervisor: Craig Yu / Assistant Professor

Co-Supervisor: Behzad Esmaeili / Assistant Professor

- Wind Tower Construction Safety Training in Virtual Reality

Department of Mechanical Engineering, UCF

Orlando, USA

M.S. Research

08/2015-05/2016

Supervisor: Shawn Putnam / Assistant Professor

- GPU Accelerated Fluid Simulation by Solving Navier-Stokes Equations

School of Computer Science and Technology, HIT

Harbin, CHINA

Graduation Design

01/2014-05/2014

Supervisor: Mingying Xin / Associate Professor

- The Design of Java^b Programming Language, Compiler, Virtual Machine and Its Applications on the Parametric Modeling For Architecture Design

SKILLS

- **Programming Skills:** Unity(3D), C#, Python, Java(3D), C/C++, OpenGL/CL, WebGL/CL, VB;
- **Multimedia Skills:** Photoshop, Premiere, After Effects, C4D, Blender;
- **Music Skills:** Violoncello, Piano, Music Composition, Jazz Drum, Erhu.
- **Art Skills:** Oil Painting, Pencil Sketching, Water Coloring;

TEACHING EXPERIENCES

Visiting Assistant Professor

Tampa, USA

- **Spring 2023:** Operating System [COP 4600] 01/2023-05/2023
- **Fall 2022:** Operating System [COP 4600] 08/2022-12/2022
- **Summer 2022:** Automata Theory [COT 4210] 05/2022-08/2022
- **Spring 2022:** Operating System [COP 4600] 01/2022-05/2022

Graduate Teaching Assistant

Fairfax, USA

- **Spring 2019:** Computer Programming for Engineers [CS 222] 01/2019-05/2019
- **Fall 2018:** Formal Methods and Models [CS330] 08/2018-01/2019
- **Spring 2018-Fall 2016:** Intro. to Low-level Programming [CS 262] 08/2016-05/2018

PROFESSIONAL SERVICES

Technical Program Committee

- **ICIGP 2023:** The 6th International Conference on Image and Graphics Processing
- **IPMV 2023:** The 5th International Conference on Image Processing and Machine Vision
- **CSEE 2023:** The 4th International Conference on Computer Science, Engineering and Education
- **ICVRT 2022:** The 5th International Conference on Virtual Reality Technology
- **WSSE 2022:** The 4th World Symposium on Software Engineering
- **ICETC 2022:** The 14th International Conference on Education Technology and Computers
- **ICIVC 2022:** The 7th International Conference on Image, Vision, and Computing

Reviewer

- **IEEE TVCG 2022:** IEEE Transactions on Visualization and Computer Graphics
- **IEEE VR 2022:** IEEE Conference on Virtual Reality and 3D User Interfaces
- **AHs 2022:** The Augmented Humans (AHs) International Conference 2022
- **AIVR 2022:** The 6th International Conference on Artificial Intelligence and Virtual Reality
- **CSAE 2022:** The 6th International Conference on Computer Science and Application Engineering

REFERENCES

Ph.D. Advisor

- **Dr. Lap-Fai (Craig) Yu** **Email:** craigy@gmu.edu
Associate Professor, Department of Computer Science
Volgenau School of Engineering, George Mason University

Collaborators

- **Dr. Yu Sun** **Email:** yusun@usf.edu
Professor, Department of Computer Science
College of Engineering, University of South Florida
- **Dr. Hong Huang** **Email:** honghuang@usf.edu
Associate Professor, School of Information
College of Arts and Sciences, University of South Florida
- **Dr. Behzad Esmaeili** **Email:** besmaei@purdue.edu
Associate Professor, Lyles School of Civil Engineering
School of Industrial Engineering, Purdue University