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), Mixed Reality (MR), Augmented Reality (AR), Augmented Virtuality (AV), Edutainment & e-Training, Procedural Modeling, Computational Design, Deep Learning (DL), Sketch-Based Interface (SBI).

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

- 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).
- **Wanwan Li.** Simulating Skydiving Experience in Virtual Reality. IEEE International Conference on Virtual Reality and Visualization (ICVRV 2022).
- **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.** 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 Virtual Reality (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*

TEACHING EXPERIENCES

Visiting Assistant Professor Tampa, USA

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

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*

SKILLS

- **Programming Skills:** Unity(3D), Python, VB, C/C++, C#, Java(3D), OpenGL/CL, WebGL/CL;
- **Multimedia Skills:** Photoshop, After Effects, Premiere, C4D;
- **Music Skills:** Violoncello, Jazz drum, Piano, Music composition.
- **Art Skills:** Oil painting, Pencil sketch, Water color;
- **Others:** Ping pong, Billiards, Skating;

REFERENCES

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

Collaborators
- **Dr. Behzad Esmaeili** **Email:** besmaeil@gmu.edu
  Assistant Professor, Department of Civil Engineering
  Volgenau School of Engineering, George Mason University

- **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