Zeyu Wang

zeyuwang@ust.hk
https://zachzeyuwang.github.io/

Research Interests

My research is at the intersection of Computer Graphics, Human-Computer Interaction, and Artificial Intelligence, with a focus on **intelligent algorithms and systems for digital content creation**. My current research topics include sketching, VR/AR, generative techniques, creative intelligence, and the synergy between computing and the arts, with applications in design, perception, and cultural heritage.

Employment

The Hong Kong University of Science and Technology (Guangzhou) — Guangzhou, Guangdong, China
Assistant Professor, Computational Media and Arts (CMA) & Artificial Intelligence — Sep 2022 – Present
The Hong Kong University of Science and Technology — Hong Kong, China
Affiliate Assistant Professor, Department of Computer Science and Engineering — Sep 2022 – Present

Education

Yale University — New Haven, CT, USA
PhD in Computer Graphics — Aug 2016 – Aug 2022
Peking University — Beijing, China
BS (Summa Cum Laude) in Machine Intelligence — Sep 2012 – Jul 2016

Publications

[23] Bingyuan Wang, Kang Zhang, **Zeyu Wang**. "Naturality: A Natural Reflection of Chinese Calligraphy." *International Symposium on Visual Information Communication and Interaction (VINCI)*, 2023. [pdf]

[22] Bingyuan Wang, Hao Li, David Kei-man Yip, **Zeyu Wang**. "Simonstown: An AI-facilitated Interactive Story of Love, Life, and Pandemic." *International Symposium on Visual Information Communication and Interaction (VINCI)*, 2023. [pdf]

[21] Junrong Song, Bingyuan Wang, **Zeyu Wang**, David Kei-man Yip. "From Expanded Cinema to Extended Reality: How AI Can Expand and Extend Cinematic Experiences." *International Symposium on Visual Information Communication and Interaction (VINCI)*, 2023. [pdf]

[20] Shumeng Zhang, Ziyan Wang, You Zhou, Hao Cui, Shihan Fu, **Zeyu Wang**, Mingming Fan. "OdorV-Art: An Initial Exploration of An Olfactory Intervention for Appreciating Style Information of Artworks in Virtual Museum." *International Symposium on Visual Information Communication and Interaction (VINCI)*, 2023. [pdf]

[19] Kang Zhang, Zhijing Shao, Yun Lu, Ying Yu, Wei Sun, **Zeyu Wang**. "Introducing Massive Open Metaverse Course (MOMC) and Its Enabling Technology." *IEEE Transactions on Learning Technologies (TLT)*, 2023. [pdf]

[18] Sherry Qiu, **Zeyu Wang**, Leonard McMillan, Holly Rushmeier, Julie Dorsey. "Is Drawing Order Important?" *Eurographics Short Papers*, 2023. [pdf]

[17] **Zeyu Wang**, Cuong Nguyen, Paul Asente, Julie Dorsey. "PointShopAR: Supporting Environmental Design Prototyping Using Point Cloud in Augmented Reality." *ACM CHI Conference on Human Factors in Computing Systems*, 2023. [pdf]

[16] **Zeyu Wang**, Tuanfeng Y. Wang, Julie Dorsey. "Learning a Style Space for Interactive Line Drawing Synthesis from Animated 3D Models." *Pacific Conference on Computer Graphics and Applications (PG)*, 2022. [pdf]

[15] **Zeyu Wang**, Cuong, Nguyen, Paul Asente, Julie Dorsey. "Point Cloud Capture and Editing for AR Environmental Design." *ACM Symposium on User Interface Software and Technology (UIST) Demos*, 2022. [pdf]

[14] Tiange Zhou, Borou Yu, Jiajian Min, **Zeyu Wang**. "DAMUS: A Collaborative System for Choreography and Music Composition." *IEEE ICME Workshop on Artificial Intelligence for Art Creation (AIART)*, 2022. [pdf]

[13] **Zeyu Wang**, Sherry Qiu, Nicole Feng, Holly Rushmeier, Leonard McMillan, Julie Dorsey. "Tracing Versus Freehand for Evaluating Computer-Generated Drawings." *ACM Transactions on Graphics (SIGGRAPH), Invited Presentation at IEEE VIS*, 2021. [pdf][project][dataset]

[12] **Zeyu Wang**, Cuong Nguyen, Paul Asente, Julie Dorsey. "DistanciAR: Authoring Site-Specific Augmented Reality Experiences for Remote Environments." *ACM CHI Conference on Human Factors in Computing Systems,* 2021. [pdf][project]

[11] Weiqi Shi, **Zeyu Wang**, Cyril Soler, Holly Rushmeier. "A Low-Dimensional Perceptual Space for Intuitive BRDF Editing." *Eurographics Symposium on Rendering (EGSR)*, 2021. [pdf]

[10] Yifei Shen, **Zeyu Wang**, Qinying Sun, Anne Chen, Holly Rushmeier. "Reconstructing Dura-Europos From Sparse Photo Collections Using Deep Contour Extraction." *Eurographics Workshop on Graphics and Cultural Heritage (EG GCH),* 2021. [pdf][video]

[9] Davit Gigilashvili, Weiqi Shi, **Zeyu Wang**, Marius Pedersen, Jon Yngve Hardeberg, Holly Rushmeier. "The Role of Subsurface Scattering in Glossiness Perception." *ACM Transactions on Applied Perception (TAP),* 2021. [pdf]

[8] **Zeyu Wang***, Shiyu Qiu*, Qingyang Chen, Natallia Trayan, Alexander Ringlein, Julie Dorsey, Holly Rushmeier. "AniCode: Authoring Coded Artifacts for Network-Free Personalized Animations." *The Visual Computer*, 2019. [pdf][video][demo][code]

[7] **Zeyu Wang**, Weiqi Shi, Kiraz Akoglu, Eleni Kotoula, Ying Yang, Holly Rushmeier. "CHER-Ob: A Tool for Shared Analysis and Video Dissemination." *ACM Journal on Computing and Cultural Heritage (JOCCH)*, 2018. [pdf][project][code]

[6] **Zeyu Wang**, Kiraz Akoglu, Holly Rushmeier. "An Introductory Video Generator for Disseminating Cultural Heritage Projects." *Eurographics Workshop on Graphics and Cultural Heritage (EG GCH)*, *Best Paper Award*, 2017. [pdf]

[5] Weiqi Shi, **Zeyu Wang**, Metin Sezgin, Julie Dorsey, Holly Rushmeier. "Material Design in Augmented Reality with In-Situ Visual Feedback." *Eurographics Symposium on Rendering (EGSR)*, 2017. [pdf]

[4] **Zeyu Wang**, Xiaohan Jin, Dian Shao, Renju Li, Hongbin Zha, Katsushi Ikeuchi. "Digital Longmen Project: A Free Walking VR System with Image-based Restoration." *Asian Conference on Computer Vision (ACCV) Workshop on e-Heritage*, 2016. [pdf][seminar][video]

[3] **Zeyu Wang**, Xiaohan Jin, Fei Xue, Renju Li, Hongbin Zha, Katsushi Ikeuchi. "Perceptual Enhancement for Stereoscopic Videos Based on Horopter Consistency." *ACM Symposium on Virtual Reality Software and Technology (VRST)*, 2016. [pdf][video]

[2] **Zeyu Wang**, James K. Min, Guanglei Xiong. "Robotics-driven Printing of Curved 3D Structures for Manufacturing Cardiac Therapeutic Devices." *IEEE International Conference on Robotics and Biomimetics (ROBIO)*, 2015. [pdf][video]

[1] **Zeyu Wang**, Xiaohan Jin, Fei Xue, Xin He, Renju Li, Hongbin Zha. "Panorama to Cube: A Content-Aware Representation Method." *ACM SIGGRAPH Asia Technical Briefs*, 2015. [pdf][video][code]

AWARDS & GRANTS

- Guangzhou Basic and Applied Basic Research Scheme 2023
- Guangzhou-HKUST(GZ) Joint Funding Scheme 2022
- Adobe Research Fellowship 2021
- Franke Interdisciplinary Research Fellowship 2018
- William Grey Warden Scholarship, Yale University 2017

- Outstanding Graduate Award, Beijing City 2016
- National Scholarship, Ministry of Education of China 2015
- iCAN-IEEE CES Global Young Innovator Award 2015

Research Experience

Yale University (Computer Graphics Group) New Haven, CT, USA
Research Assistant advised by Julie Dorsey, Holly Rushmeier, Leonard McMillan Aug 2016 – Aug 2022

Adobe Research (Creative Intelligence Lab) London, UK
Research Intern advised by Tuanfeng Wang, Aaron Hertzmann, Li-Yi Wei Jun 2021 – Aug 2021

Adobe Research (Creative Intelligence Lab) San Jose, CA, USA
Research Intern advised by Paul Asente and Cuong Nguyen Jun 2020 – Sep 2020

Harvard University (Chinese Art Media Lab) Cambridge, MA, USA
Technical Advisor to Eugene Wang and Chenchen Lu Aug 2021 – Aug 2022

Google (Display Advertising Team and Google Research) Mountain View, CA, USA
Research Intern advised by Xia Li and Feng Yang Jun 2017 – Aug 2017

Peking University (Key Laboratory of Machine Perception) Beijing, China
Research Assistant advised by Hongbin Zha and Katsushi Ikeuchi Jul 2013 – Aug 2016

Microsoft Research Asia (Visual Computing Group) Beijing, China
Research Intern advised by Peiran Ren and Gang Hua Feb 2016 – Jun 2016

Teaching

- HKUST(GZ) CMAA 5025: Computational Techniques for Sketch-based Creativity Spring 2023
- Yale CPSC 579: Advanced Topics in Computer Graphics Spring 2018, Fall 2020, Fall 2021, Fall 2022
- Yale CPSC 576: Advanced Computational Vision Spring 2022
- Yale CPSC 678: Creative Artificial Intelligence for Visual Computing Spring 2019, Spring 2021
- Yale CPSC 578: Computer Graphics Spring 2020
- Yale CPSC 376: Advanced Web Development in the Digital Humanities Fall 2018, Fall 2019
- Yale CPSC 100: Introduction to Computing and Programming (joint with Harvard CS50) Fall 2017
- Peking University: Data Structures and Algorithms (A) Fall 2015

Mentoring

- PhD Students: Bingyuan Wang, Yulin Shen, Zhongyue Guan, Shuai Zou, Duotun Wang, Kanghao Chen
- MPhil Students: Hao Li, You Zhou, Xinyu Ma, Yiran Chen, Yue Lin
- Assistants & Interns: Zhe Yan, Yudong Huang, Hengyu Meng, Jiawen Cheng, Siyuan Luo, Xiaohan Wang
- Yale Mentees: Noah Shapiro, Yifen Shen, Isabel Lee, Ting Gao, Evelyn Huang, Nishitha Burman, Nicole Feng, Bonnie Rhee, Alexander Ringlein

Service

- Reviewer for ACM TOG, SIGGRAPH, CHI, IEEE VR, TVCG, CGF, EG, PG, JOCCH, Computers & Graphics, Graphics and Visual Computing, VRST, MIR, TLT, RGC/UGC 2018 – Present
- IEEE ICME AIART Workshop Co-chair 2023
- IEEE VR Conference Session Chair 2023
- ACM VINCI Program Committee 2023

- HKUST(GZ) RBM Selection and Interview (S&I) Committee 2023
- HKUST(GZ) Information Hub Student-Staff Liaison Committee 2023
- HKUST(GZ) Computational Media and Arts Head Search Committee 2023
- Yale Computer Science Social Leader 2018
- Vice President, Association of Chinese Students and Scholars at Yale (ACSSY) 2017
- Student Volunteer, SIGGRAPH Asia Conference 2015
- Vice President of EECS Student Union, Peking University 2014
- Student Volunteer for Media Center, APEC Leaders' Summit 2014

ADDITIONAL INFORMATION

Computer Skills: C/C++, Python, MATLAB, OpenCV, OpenGL, Qt, VTK, PyTorch, TensorFlow, Caffe, HTML, JavaScript (Node, Vue, Three), CSS, SQL, PHP, Swift (ARKit), Java (Android Studio), Shell Script, VBA, LaTeX, Blender, Unity, Maya, Photoshop, Premiere
Languages: Chinese (native), English (fluent), Japanese (intermediate), Korean (intermediate)

Last updated on July 29, 2023