

# Zeyu Wang

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<https://zachzeyuwang.github.io/>

## RESEARCH INTERESTS

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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

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<b>The Hong Kong University of Science and Technology (Guangzhou)</b>	Guangzhou, China
Assistant Professor, Thrust of Computational Media and Arts	Sep 2022 – Present
Assistant Professor, Thrust of Artificial Intelligence	May 2023 – Present
<b>The Hong Kong University of Science and Technology</b>	Hong Kong, China
Affiliate Assistant Professor, Department of Computer Science and Engineering	Feb 2023 – Present
Assistant Professor, Division of Emerging Interdisciplinary Areas	Apr 2024 – Present

## EDUCATION

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

## PUBLICATIONS

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For the full publication list and project pages, refer to <https://cislab.hkust-gz.edu.cn/publications/>

CCF-A journals and conferences and equivalent: (7/8 are corresponding or first author)

- [A01] Boyu Li, Linping Yuan, Zhe Yan, Qianxi Liu, Yulin Shen, **Zeyu Wang**. “AniCraft: Crafting Everyday Objects as Physical Proxies for Prototyping 3D Character Animation in Mixed Reality.” *ACM Symposium on User Interface Software and Technology (UIST)*, 2024.
- [A02] Shen Ciao, Zhongyue Guan, Qianxi Liu, Li-Yi Wei, **Zeyu Wang**. “Ciallo: GPU-Accelerated Rendering of Vector Brush Strokes.” *ACM SIGGRAPH Conference Proceedings*, 2024.
- [A03] Zhijing Shao, Zhaolong Wang, Zhuang Li, Duotun Wang, Xiangru Lin, Yu Zhang, Mingming Fan, **Zeyu Wang**. “SplattingAvatar: Realistic Real-Time Human Avatars with Mesh-Embedded Gaussian Splatting.” *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024
- [A04] Yulin Shen, Yifei Shen, Jiawen Cheng, Chutian Jiang, Mingming Fan, **Zeyu Wang**. “Neural Canvas: Supporting Scenic Design Prototyping by Integrating 3D Sketching and Generative AI.” *ACM CHI Conference on Human Factors in Computing Systems*, 2024.
- [A05] Zhiqing Wu, Duotun Wang, Shumeng Zhang, Yuru Huang, **Zeyu Wang**, Mingming Fan. “Toward Making Virtual Reality (VR) More Inclusive for Older Adults: Investigating Aging Effect on Target Selection and Manipulation Tasks in VR.” *ACM CHI Conference on Human Factors in Computing Systems*, 2024.
- [A06] **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.

- [A07] **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.
- [A08] **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.

Other venues recommended by CCF, CSE, and CMA: (8/13 are corresponding or first author)

- [B01] Xinyu Ma, Zhe Yan, Hengyu Meng, Zhihao Cao, Yanan Jin, **Zeyu Wang**. “Get Your Hands Dirty? A Comparative Study of Tool Usage and Perceptual Engagement in Physical and Digital Sculpting.” *ACM Conference on Creativity & Cognition, Best Paper Honorable Mention Award*, 2024.
- [B02] Siyuan Luo, Borou Yu, **Zeyu Wang**. “DASKEL: An Interactive Choreographic System with Labanotation-Skeleton Translation.” *Pacific Conference on Computer Graphics and Applications (PG)*, 2023.
- [B03] Bingyuan Wang, Kang Zhang, **Zeyu Wang**. “Naturalness: A Natural Reflection of Chinese Calligraphy.” *International Symposium on Visual Information Communication and Interaction (VINCI)*, 2023.
- [B04] 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.
- [B05] 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.
- [B06] 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.
- [B07] 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.
- [B08] **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.
- [B09] Weiqi Shi, **Zeyu Wang**, Cyril Soler, Holly Rushmeier. “A Low-Dimensional Perceptual Space for Intuitive BRDF Editing.” *Eurographics Symposium on Rendering (EGSR)*, 2021.
- [B10] 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.
- [B11] **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.
- [B12] **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.
- [B13] 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.

Short papers, workshops, demos, posters, and others: (9/11 are corresponding or first author)

- [C01] Hao Li, Zhongyue Guan, **Zeyu Wang**. “An Inverse Procedural Modeling Pipeline for Stylized Brush Stroke Rendering.” *Eurographics Short Papers*, 2024.
- [C02] Yue Lin, Yudong Huang, David Yip, **Zeyu Wang**. “AgileFingers: Authoring AR Character Animation Through Hierarchical and Embodied Hand Gestures.” *IEEE Conference on Virtual Reality and 3D User Interfaces Posters, Best Poster Honorable Mention Award*, 2024.

- [C03] Sherry Qiu, **Zeyu Wang**, Leonard McMillan, Holly Rushmeier, Julie Dorsey. “Is Drawing Order Important?” *Eurographics Short Papers*, 2023.
- [C04] **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.
- [C05] 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.
- [C06] 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.
- [C07] **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.
- [C08] **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.
- [C09] **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.
- [C10] **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.
- [C11] **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.

## AWARDS & GRANTS

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- Tencent Tanyuan Project for Digital Heritage 2024
- CCF-Tencent Rhino-Bird Research Fellowship 2023
- 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

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<b>Yale University (Computer Graphics Group)</b>	New Haven, CT, USA
Research Assistant advised by Julie Dorsey, Holly Rushmeier, Leonard McMillan	Aug 2016 – Aug 2022
<b>Adobe Research (Creative Intelligence Lab)</b>	London, UK
Research Intern advised by Tuanfeng Wang, Aaron Hertzmann, Li-Yi Wei	Jun 2021 – Aug 2021
<b>Adobe Research (Creative Intelligence Lab)</b>	San Jose, CA, USA
Research Intern advised by Paul Asente and Cuong Nguyen	Jun 2020 – Sep 2020
<b>Harvard University (Chinese Art Media Lab)</b>	Cambridge, MA, USA
Technical Advisor to Eugene Wang and Chenchen Lu	Aug 2021 – Aug 2022
<b>Google (Display Advertising Team and Google Research)</b>	Mountain View, CA, USA
Research Intern advised by Xia Li and Feng Yang	Jun 2017 – Aug 2017

**Peking University (Key Laboratory of Machine Perception)**  
Research Assistant advised by Hongbin Zha and Katsushi Ikeuchi

Beijing, China  
Jul 2013 – Aug 2016

**Microsoft Research Asia (Visual Computing Group)**  
Research Intern advised by Peiran Ren and Gang Hua

Beijing, China  
Feb 2016 – Jun 2016

## TEACHING

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- CMAA 5025: Computational Techniques for Sketch-based Creativity Spring 2023, Fall 2023, Fall 2024
- INFH 6780: Career Development for Information Hub Students Spring 2024
- CMAA 5014: Experimental 3D Rendering and Motion Fall 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

## ADVISING & STUDENT COMMITTEES

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- Postdocs: Zhengyu Huang, Haoran Mo
- PhD Students: Bingyuan Wang, Yulin Shen, Zhongyue Guan, Shuai Zou, Zhijing Shao, Duotun Wang, Kanghao Chen, You Zhou, Kang Du, Fengqi Liu
- MPhil Students: Hao Li, Xinyu Ma, Yue Lin, Yiran Chen, Zhe Yan, Boyu Li, Qianxi Liu, Zeyu Cai, Lanjiang Li, Keqing Liu, Hongbin Huang, Hengyu Meng
- UG Students: Fangteng Fu, Zilang Zeng
- RAs & Interns: Yudong Huang, Jiawen Cheng, Siyuan Luo, Xiaohan Wang, Shuolin Xu
- Yale Mentees: Noah Shapiro, Yifen Shen, Isabel Lee, Ting Gao, Evelyn Huang, Nishitha Burman, Nicole Feng, Bonnie Rhee, Alexander Ringlein
  
- PhD Defense Committee: Jiajun Ma
- PhD Defense Proposal Committee: Xiaofu Jin
- PhD Qualifying Exam Committee: Danlu Fei, Xiaofu Jin, Chutian Jiang, Zhan Wang, Yihan Hou, Rong Huang, Jiaxu Wang
- MPhil Defense Committee: Xian Wang, Juhyung Son, Hao Cui, Li Feng, Junrong Song, Handi Yin, Minjie Liu

## SERVICE

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- Co-Chair: AIART ('23, '24)
- Program Committee: VINCI ('23, '24), EG ('24, '25), SIGGRAPH Asia '24 Courses/Technical Communications and Posters, GMP '24, Chinagraph '24, CAD/CG '24, GDC '24
- Reviewer for Journals: TOG, TVCG, TPAMI, CGF, JOCCH, CAGD, C&G, Graphics and Visual Computing, ACM Computing Surveys, IEEE TLT, Machine Intelligence Research
- Reviewer for Conferences: SIGGRAPH, SIGGRAPH Asia, CHI, UIST, VR, EG, PG, VRST, etc.
  
- 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

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**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 26, 2024