Linping YUAN, Ph.D., Resume

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Research Assistant Professor
Department of Computer Science and Engineering
Hong Kong University of Science and Technology

Research Interests

My research interests lie at the intersection of **virtual/augmented reality** (VR/AR), **human-computer interaction** (HCI), **artificial intelligence** (AI), and **data visualization** (VIS). I design and develop novel AI algorithms, visual analytics techniques, and interactive systems to foster a symbiotic partnership between humans and AI, supporting various fields such as digital twins, creative media, education, public health, and heritage protection. My work has been published in top-tier computer graphics and HCI journals (e.g., TVCG, IJHCS, IJHCI) and conferences (e.g., CHI, UIST, VIS). My research has received two Best Paper Honorable Mention Awards and secured HK$1.27M in funding.

Appointment

Hong Kong University of Science and Technology (HKUST) — **Hong Kong, China**
Department of Computer Science and Engineering (CSE) — *2024-present*
Research Assistant Professor

- Selected through a prestigious global search with multi-stage evaluation by the Department of CSE, the School of Engineering, and the university leadership, surpassing hundreds of candidates.
- Appointed to a university-supported faculty position to lead research and secure competitive external funding as a principal investigator, while teaching students as an instructor.

Education

Hong Kong University of Science and Technology — **Hong Kong, China**
Ph.D. in Computer Science and Engineering — *2019-2024*
Thesis: Adapting Computational Creativity Support from Desktop to Virtual Reality
Committee: Profs. Huamin Qu (Supervisor), Kwan-Liu Ma (External, ACM Fellow, IEEE Fellow), Pedro Sander, Wenhan Luo, and Dan Xu

Xi'an Jiaotong University (XJTU) — **Xi'an, China**
B.Eng. (Honors) in Software Engineering (Ranked first) — *2015-2019*

Professional Experience

University of Cambridge — **Cambridge, United Kingdom**
Research Intern, Department of Engineering — *Jan. 2024-May 2024*
Worked with Prof. Per Ola Kristensson on [J7]

Zhejiang Lab — **Hangzhou, China**
Research Intern, Center for Data Mining and Knowledge Discovery — *Dec. 2020-Jul. 2021*
Worked with Prof. Yingcai Wu (Zhejiang University)

University of Waterloo — **Remotely**
Research Intern, School of Computer Science — *Dec. 2019-Mar. 2020*
Worked with Prof. Jian Zhao on [J2]

UISEE Technology — **Nanjing, China**
Research Intern, Self-Driving Automobile Team — *Apr. 2019-Jul. 2019*
Worked with Prof. Jianbo Shi (University of Pennsylvania)

Publications

Note about venues: In the fields of human-computer interaction (Google Scholar ranking) and data visualization (Google Scholar ranking), ACM CHI, ACM UIST, IEEE VIS, and IEEE VR are recognized as the very top-tier conferences, while IJHCS, IJHCI, and IEEE TVCG are regarded as the very top-tier journals.

Note about conferences and journals: In Computer Science, conferences are considered equally as impactful as journals. Top-tier conferences are highly selective, featuring a rigorous review process for full manuscripts and an annual acceptance rate of around 20–25%.

Note about authorships: The asterisk (*) indicates (co-)corresponding authors; the underline indicates students I mentored.

Peer-reviewed Full-length Journal Publications (J)

[J7] **Linping Yuan**, John J Dudley, Per Ola Kristensson, Huamin Qu. Personalized Dual-Level Color Grading for 360-degree Images in Virtual Reality. In *IEEE Transactions on Visualization and Computer Graphics, 31(5), 2435-2444 (IEEE TVCG 2025)*

[J6] Wai Tong, Kento Shigyo, **Linping Yuan**, Mingming Fan, Ting-Chuen Pong, Huamin Qu, Meng Xia. VisTellAR: Embedding Data Visualization to Short-form Videos Using Augmented Reality. In *IEEE Transactions on Visualization and Computer Graphics 31(3), 1862-1874 (IEEE TVCG 2025)*

[J5] Jin Tian, Yifan Cao, Lingyi Feng, Dongting Fu, **Linping Yuan**, Huamin Qu, Yang Wang, Mingming Fan. PoeticAR: Reviving Traditional Poetry of the Heritage Site of Jichang via Augmented Reality. In *International Journal of Human-Computer Interaction, 40(6), 1438-1454 (IJHCI 2024)*

[J4] Qian Zhu, **Linping Yuan**, Zian Xu, Leni Yang, Meng Xia, Zhuo Wang, Hai-Ning Liang, Xiaojuan Ma. From Reader to Experiencer: Design and Evaluation of an Interactive VR Story for Promoting the Situation Awareness of Public Health Threats. In *International Journal of Human-Computer Studies, 181, 103137 (IJHCS 2023)*

[J3] Wai Tong, Zhutian Chen, Meng Xia, Leo Yu-Ho Lo, **Linping Yuan**, Benjamin Bach, Huamin Qu. Exploring Interactions with Printed Data Visualizations in AR. In *IEEE Transactions on Visualization and Computer Graphics, 29(1), 418-428 (IEEE TVCG 2022)*
🏆 **Honorable Mention Award (Top 5%)**

[J2] **Linping Yuan**, Ziqi Zhou, Jian Zhao, Yiqiu Guo, Fan Du, Huamin Qu. Infocolorizer: Interactive Recommendation of Color Palettes for Infographics. In *IEEE Transactions on Visualization and Computer Graphics, 28(12), 4252-4266 (IEEE TVCG 2021)*

[J1] **Linping Yuan**, Wei Zeng, Siwei Fu, Zhiliang Zeng, Haotian Li, Chi-Wing Fu, Huamin Qu. Deep Colormap Extraction from Visualizations. In *IEEE Transactions on Visualization and Computer Graphics, 28(12), 4048-4060 (IEEE TVCG 2021)*

Peer-reviewed Full-length Conference Publications (C)

[C14] **Linping Yuan**, Le Lin, Yuquan Lin, Jun Han, Zikun Deng, Weicong Cheng, Huamin Qu. Towards Understanding Time-Varying Spatial 3D Data Analysis with Animation and Small Multiples in VR and Desktop. In *IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR 2026), To Appear*

[C13] Jindu Wang, Runze Cai, Shuchang Xu, Tianrui Hu, Huamin Qu, Shengdong Zhao*, **Linping Yuan***. Wearable AR for Restorative Breaks: How Interactive Narrative Experiences Support Relaxation for Young People. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (ACM CHI 2026), To Appear*

[C12] Boyu Li, **Linping Yuan**, Zeyu Wang, Hongbo Fu. SketchDynamics: Exploring Free-Form Sketches for Dynamic Intent Expression in Animation Generation. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (ACM CHI 2026), To Appear*

[C11] Wenshuo Zhang, Leixian Shen, Shuchang Xu, Jindu Wang, Jian Zhao, Huamin Qu, **Linping Yuan***. NeuroSync: Intent-Aware Code-Based Problem Solving via Direct LLM Understanding Modification. In *ACM Symposium on User Interface Software and Technology (ACM UIST 2025)*
🏆 **Honorable Mention Award (Top 2%)**

[C10] Boyu Li, **Linping Yuan**, Zeyu Wang. VideoCraft: A Mixed Reality-empowered Video Generation Workflow with Spatial Layer Editing for Concept Video Creation. In *ACM Symposium on User Interface Software and Technology (ACM UIST 2025)*

[C9] Yifei Zhang, **Linping Yuan***, Yuheng Zhao, Jielin Feng, Siming Chen*. KinemaFX: A Kinematic-Driven Interactive System for Particle Effect Exploration and Customization. In *ACM Symposium on User Interface Software and Technology* (*ACM UIST 2025*)

[C8] **Linping Yuan**, Feilin Han, Liwenhan Xie, Junjie Zhang, Jian Zhao, Huamin Qu. "You'll Be Alice Adventuring in Wonderland!" Processes, Challenges, and Opportunities of Creating Animated Virtual Reality Stories. In *Proceedings of the ACM Conference on Human Factors in Computing Systems* (*ACM CHI 2025*)

[C7] Ka Yan Fung, Lik Hang Lee, **Linping Yuan**, Kwong Chiu Fung, Kuen Fung Sin, Tze Leung Rick Lui, Huamin Qu, Shenghui Song."DysVis: A User-Centred Data Visualization System for Dyslexia Prescreening. In *Proceedings of the ACM Conference on Human Factors in Computing Systems* (*ACM CHI 2025*)

[C6] Yifei Zhang, Jingyan Zhang, Ziyue Lin, **Linping Yuan**, Jun Han, Yalong Yang, Siming Chen. ST2VR: An Authoring System for Spatio-Temporal Storytelling in Virtual Reality with Hierarchical Narrative Structure. In *IEEE Pacific Visualization Conference* (*IEEE PacificVis 2025*)

[C5] **Linping Yuan**, Boyu Li, Jindong Wang, Huamin Qu, Wei Zeng. Generating Virtual Reality Interaction Data from Out-of-Distribution Desktop Data: An Exploration Using Stroke Gestures. In *IEEE Conference on Virtual Reality and 3D User Interfaces* (*IEEE VR 2024*)

[C4] Shuchang Xu, Chang Chen, Zichen Liu, Xiaofu Jin, **Linping Yuan***, Yukang Yan, Huamin Qu. Memory Reviver: Supporting Photo-Collection Reminiscence for People with Visual Impairment via a Proactive Chatbot. In *ACM Symposium on User Interface Software and Technology* (*UIST 2024*)

[C3] 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. In *ACM Symposium on User Interface Software and Technology* (*ACM UIST 2024*)

[C2] Zhan Wang, **Linping Yuan**, Liangwei Wang, Wei Zeng. VirtuWander: Enhancing Seamless Multi-modal Interaction for Virtual Tour Guidance through Large Language Models. In *Proceedings of the ACM Conference on Human Factors in Computing Systems* (*ACM CHI 2024*)

[C1] **Linping Yuan**, Yuanzhe Chen, Siwei Fu, Aoyu Wu, Huamin Qu. SpeechLens: A Visual Analytics Approach for Exploring Speech Strategies with Textural and Acoustic Features. In *IEEE International Conference on Big Data and Smart Computing* (*IEEE BigComp 2019*)

Preprints (P)

[P3] Mohammad Hasan Payandeh, **Linping Yuan**, Jian Zhao. NoteEx: Interactive Visual Context Manipulation for LLM-Assisted Exploratory Data Analysis in Computational Notebooks. Under Review

[P2] Yaning Li, Ke Zhao, Shucheng Zheng, Xingyu Chen, Chenyi Chen, Wenxi Dai, Weile Jiang, Qi Dong, Yiqing Zhao, Meng Li, **Linping Yuan***. Pre/Absence: Prompting Cultural Awareness and Understanding for Lost Architectural Heritage in Virtual Reality. Under Review

[P1] Ananya Ipsita, Ramesh Kaki, Ziyi Liu, Mayank Patel, Runlin Duan, Lakshmi Deshpande, **Linping Yuan**, Victoria Lowell, Ashok Maharaj, Kylie Peppler, Steven Feiner, Karthik Ramani. Virtual Reality in Manufacturing Education: A Scoping Review Indicating State-of-the-Art, Benefits, and Challenges Across Domains, Levels, and Entities. Under Review

Awards & Honors

Paper Awards

Best Paper Honorable Mention (as the corresponding author), ACM UIST 2025 (Top 2%) [C11] *2025*

Best Paper Honorable Mention, IEEE VIS 2022 (Top 5%) [J3] *2022*

Fellowships & Scholarships

HKUST RedBird Academic Excellence Award (Twice; HKD 40,000 in total) *2022, 2023*

Style3D Graduate Fellowship (10 in China; RMB 30,000) *2022*

Deloitte ESG Innovation Award in HackUST (Top prize; HKD 50,000) *2022*

Outstanding Graduates of XJTU *2019*

National Scholarship (Three Times; RMB 24,000 in total) *2016-2018*

Contributions to Funded Projects

[G4] **Integrated ML-Numerical Model-Visualization System in the China Sea (HK$ 1.27M)**
Internal funding from the Center for Ocean Research in Hong Kong and Macau *2025-2026*
- **Co-Investigator**: Played a key role in proposal writing and successfully defended it to the funding committee.
- **Project Leader**: Leading the design and development of an immersive serious game-based visualization system to communicate marine knowledge effectively to a general audience.

[G3] **A Digital Twin for Enhancing Coastal Resilience against Extreme Storm Surges (HK$ 62M)**
Theme-based Research (TRS) Scheme by HK RGC, T22-607/24N *2025-2030*
- **Project Leader for a Component**: Leading the design and development of visual analytics for storm surges; collaborating with researchers in civil engineering and mathematics; disseminating research outcomes through workshops.

[G2] **Study of the Regional Earth System for Sustainability under Climate Change (HK$ 87M)**
Areas of Excellence (AoE) Scheme by HK RGC, AoE/P-601/23-N *2024-2029*
- **Project Leader for a Component**: Leading the design and development of immersive visualizations and deep learning techniques to advance the creation of a digital twin for the Greater Bay Area; collaborating with researchers in ocean sciences; disseminating research outcomes through workshops.

[G1] **Augmenting Situated Visualizations with Tangible User Interfaces (HK$ 1M)**
General Research Fund (GRF) by HK RGC, 16214623 *2024-2026*
- **Major proposal contributor**: Proposed research ideas and wrote the majority of the proposal.

Patent

[PT1] Huamin Qu, Yuanzhe Chen, Siwei Fu, **Linping Yuan**, Aoyu Wu. System and a Method for Speech Analysis. US20200273450A1. Filed in 2019, granted in 2020.
*This patent is based on my first-author paper, **SpeechLens** [C1], and has been integrated into LifeHikes, a product empowering over 700,000 people to enhance their communication skills.*

Teaching

Course Instructors

COMP 2011 Programming with C++, HKUST *Spring 2025, Spring 2026 (Planned)*
- Taught a complete session from start to finish to 90 students, comprising Year 1 to Year 4 undergraduates from diverse majors such as engineering, business, and mathematics.
- Collaborated with 3 other instructors, 15 postgraduate TAs, and 4 undergraduate TAs in shared teaching activities (e.g., lab exercises, project assignments, and exams) for a total of 500 students across six sessions.
- Demonstrated proficiency in various teaching activities, effective coordination, addressing student requests, and resolving conflicts.

Teaching Assistants

COMP 4462 Data Visualization, HKUST *Fall 2022*
COMP 1021 Introduction to Computer Science, HKUST *Fall 2020, Spring 2021*
COMP 2011 Programming with C++, HKUST *Fall 2021*

Mentoring

Ph.D. Students

Boyu Li, Ph.D. student at HKUST, primary mentor for [C3, C10, C12] *2022-present*
Wenshuo Zhang, Ph.D. student at HKUST, primary mentor for [C11] (Honorable Mention) *2024-present*
Mohammad Payandeh, Ph.D. student at University of Waterloo, mentor for [P3] *2025*
Ananya Ipsita, Ph.D. student at Purdue University, mentor for [P1] *2025*
Shuchang Xu, Ph.D. student at HKUST, primary mentor for [C4] *2024*
Zhan Wang, Ph.D. student at HKUST(GZ), primary mentor for [C2] *2023*

Master Students

Yifei Zhang, master student at Fudan University, primary mentor for [C6, C9] *2024-2025*
Jindu Wang, master student at HKUST, primary mentor for [C13] *2024-present*
Biying Xu, master student at HKUST, primary mentor for an ongoing project *2025-present*

Undergraduate Students

Yaning Li, undergraduate student at XJTU, primary mentor for [P2] *2025-present*
Yuquan Lin, undergraduate student at XJTU, primary mentor for an ongoing project *2025-present*

Service

Organizing Committee

The Role of AI in HCI Education (CHI 2026 Meet-Ups) **Barcelona, Spain**
Organizers: Per Ola Kristensson, Elizabeth F. Churchill, Kasper Hornbæk, Antti Oulasvirta, Malak Sadek, Albrecht Schmidt, **Linping Yuan**

Program Committees

ACM CHI, Computational Interaction Subcommittee *2025*
SIGGRAPH Asia, Emerging Technologies Committee *2025*
International Conference on Human-Engaged Computing *2025*

Paper Reviewers

Reviewers for multiple conferences and journals *2019-2025*
ACM CHI, ACM UIST, IEEE VR, IEEE VIS, IEEE TVCG, IEEE PacificVis, EuroVis, ACM CSCW, ACM TiiS, ACM VRST, Visual Informatics
Received 8 special recognitions for exceptional reviews for ACM CHI (7), ACM UIST (1) *2024-2025*

Invited Talks

Beyond Static Design: An Architecture for Dynamic Human-AI Systems *2025*
IIMP6090 Postgraduate Seminar, HKUST, Hong Kong, China, Nov. 2025

Towards Intent-aware and Context-aware Human-Creative AI Collaboration *2025*
Human-Centered Systems Lab, Karlsruhe Institute of Technology, Karlsruhe, Germany, Nov. 2025

Towards Immersive 3D Spatio-Temporal Data Analysis for Digital Twins *2025*
TRS Project ([G3]) Workshop, HKUST, Hong Kong, China, Oct. 2025

Computational Creativity Support for Animated Virtual Reality Stories *2025*
Media and Interaction Lab, Tsinghua University, Beijing, China, Jul. 2025
School of Computer Science and Engineering, Beihang University, Beijing, China, Jul. 2025
School of Data Science, Fudan University, Shanghai, China, Jul. 2025
School of Information Science and Technology, ShanghaiTech University, Shanghai, China, Jul. 2025
Computational Media and Arts, HKUST (GZ), Guangzhou, China, Jun. 2025

Personalized Dual-Level Color Grading for 360-degree Images in Virtual Reality *2025*
Conference talk @IEEE VR 2025, Saint-Malo, France, Mar. 2025

Generating VR Stroke Gesture Data from Out-of-Distribution Desktop Stroke Gesture Data *2024*
Conference talk @IEEE VR 2024, Orlando, USA, Mar. 2024

InfoColorizer: Interactive Recommendation of Color Palettes for Infographics *2021*
Conference talk @IEEE VIS 2021, Online, Oct. 2021

References

- Prof. Huamin Qu (huamin@cse.ust.hk) *Hong Kong University of Science and Technology*
- Prof. Per Ola Kristensson (pok21@cam.ac.uk) *University of Cambridge*
- Prof. Jian Zhao (jianzhao@uwaterloo.ca) *University of Waterloo*