

# XINYU SHI

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## RESEARCH INTEREST

My current research focuses on **Human-Computer Interaction**, particularly, **Human-AI Co-Creation** and **AI-Powered Creativity Support Tool**. The goal of my research is to design, develop, and evaluate interactive AI systems that effectively incorporate human intent into the computation process in order to boost the productivity of creative activities. My research seeks to gain a deeper understanding of the flow of creativity and to enhance human intelligence and creativity.

## EDUCATION

**Ph.D. in Computer Science** | *advisor: Prof. Jian Zhao*  
University of Waterloo

Sept. 2021 – Present  
Waterloo, ON, Canada

**B.Eng. in Software Engineering**  
Xiamen University

Sept. 2016 – Jun. 2020  
Xiamen, China

## PUBLICATIONS

### C.1 De-Stijl: Facilitating Graphics Design with Interactive 2D Color Palette Recommendation

X. Shi, Z. Zhou, J. Zhang, A. Neshati, A. K. Tyagi, R. Rossi, S. Guo, F. Du, and J. Zhao.  
Conditionally accepted by **ACM CHI 2023**.

### C.2 Real-World Blind Super-Resolution via Feature Matching with Implicit High-Resolution Priors

C. Chen\*, X. Shi\*, Y. Qin, X. Li, X. Han, T. Yang, and S. Guo. (\* equal contribution)  
In Proceedings of the 30th ACM International Conference on Multimedia (**MM2022**). *Oral (Top 5%)*

### C.3 Teaching American Sign Language in Mixed Reality

Q. Shao, A. Sniffen, J. Blanchet, M. E. Hillis, X. Shi, T. K. Haris, J. Liu, J. Lamberton, M. Malzkuhn, L. C. Quandt, J. Mahoney, D. Kraemer, X. Zhou, and D. Balkcom.  
In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**IMWUT, Ubicomp2021**).

### C.4 Accurate and Fast Classification of Foot Gestures for Virtual Locomotion

X. Shi\*, J. Pan\*, Z. Hu, J. Lin, S. Guo, M. Liao, Y. Pan, and L. Liu. (\* equal contribution)  
In Proceedings of the 2019 IEEE International Symposium on Mixed and Augmented Reality (**ISMAR2019**).

### J.1 Droplet-Transmitted Infection Risk Ranking Based on Close Proximity Interaction

S. Guo, J. Yu, X. Shi, H. Wang, F. Xie, X. Gao, and M. Jiang.  
Frontiers in Neurobotics 13 (2020): 113.

## RESEARCH EXPERIENCE

### University of Waterloo

Graduate Research Assistant in HCI | Advised by Prof. Jian Zhao  
Design interactive *Human-AI Co-Creation* system to augment human creativity and productivity.

Waterloo, ON, Canada  
Sept. 2021 – Present

### The Chinese University of Hong Kong, Shenzhen

Research Assistant in CV | Advised by Prof. Xiaoguang Han  
Proposed an approach based on *Vector-Quantized GAN* for *Image Super-Resolution*.

Shenzhen, China  
Dec. 2020 – Aug. 2021

### Dartmouth College

Research Assistant in HCI | Advised by Prof. Xia Zhou and Prof. Xing-Dong Yang  
Leveraged *wearable sensing technique* and *Mixed-Reality* to facilitate *American-Sign-Language teaching*.

Hanover, NH, USA  
Sept. 2019 – Apr. 2020

### Xiamen University

Research Assistant in HCI | Advised by Prof. Shihui Guo  
Exploited *wearable devices*, i.e., smart insoles, for *VR locomotion* with learned *gesture recognition models*.

Xiamen, China  
Sept. 2017 – Aug. 2021

## HONORS AND AWARDS

Vector Scholarship in AI, Vector Institute   \$17,500 for one year	2021
International Doctoral Student Award, University of Waterloo   \$15,000 per year	2021
Award for Excellence in Academic Performance, Xiamen University   ¥5,000 per year	2017 - 2020

## SKILLS

**Programming:** Python, C, C++, Java, SQL, Shell  
**Framework:** PyTorch, D3.js, Numpy, Sklearn