

Jianhui YAN

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🔗 <https://yimkf.github.io/>

EDUCATION

Research Intern

Human Computer Interaction Lab at Saarland University

Research advisor: Prof. Jürgen Steimle's [🔗](#)

06/2024 – 09/2024

Saarbrücken, Germany

Exchange Student

Polytech Nantes

01/2024 – 05/2024

Nantes, France

M.S. Electronic Information Engineering

School of Electronic and Information Engineering, South China University of Technology

Research advisor: Prof. Lin Shu [🔗](#)

09/2022 – present

Guangzhou, China

B.S. Information Engineering

School of Electronic and Information Engineering, South China University of Technology

GPA: 3.71/4.0

09/2018 – 06/2022

Guangzhou, China

RESEARCH INTERESTS

Human Computer Interaction (HCI), Wearable Haptic System, Virtual/Augmented Reality (VR/AR), Force Feedback

PUBLICATION

Under Review

EMS Hand Prop: Leveraging the Loss of SoA Caused by EMS to Make Hands Serve Better as Virtual Objects

Jianhui Yan, Jiesi Zhang, Haoqiang Hua, Wenxuan Wu, Hongnan Lin, Qiwei Xiong, Jianxiu Jin, Lin Shu.

Submitted to the **International Journal of Human-Computer Studies** [🔗](#)

Rejected and preparing for resubmission

CHI 2025 Paper: A Mobile and Wearable Haptic Device (Confidential)

Arata Jingu, Jianhui Yan, Maja Fehlbeg, Roland Bennewitz, Jürgen Steimle.

Working with Arata Jingu [🔗](#) under Prof. Jürgen Steimle's [🔗](#) supervision as a co-author. Unfortunately, the paper is rejected and **confidential** as we are working on it currently.

RESEARCH EXPERIENCE

EMS Hand Prop: Leveraging the Loss of SoA Caused by EMS to Make Hands Serve Better as Virtual Objects

08/2023 – 01/2024

- **Novel concept:** Leveraging the loss of SoA caused by EMS to make the stimulated hand serve better as a virtual object
- **Finger Actuation via Wearable Devices:** Developed an EMS-based system to actuate users' hands, enabling 8 distinct gesture poses
- **Interactive System Integration:** Developed an interaction system combining EMS actuation and data-glove-based gesture recognition, facilitating immersive user participation in gestural object retrieval tasks and interactive scenarios.

CHI 2025 : A Mobile and Wearable Haptic Device (Rejected and preparing for resubmission)

06/2024 – 09/2024

- **VR/MR Software Development:** Developed a built-in app for Oculus Quest 3 within a mixed reality (MR) environment, including several application scenarios.

- **Prototyping:** Established the communication between Quest 3, haptic devices, and mobile computers, enabling a fully mobile system.
- **Research Contribution:** Contributed to brainstorming and ideation for the paper, exploring multiple application possibilities.

Construction of immersive and interactive methodology based on physiological indicators to subjectively and objectively assess comfort and performances in work offices

03/2024 – 05/2024

- **Data Analysis:** Processing and synchronizing the physiological data, and analyzing the data using neurokit2 [↗](#).
- **Building research environment:** Recreating a real-life room in Unity and setting up the environment for user study

Smart Magic Mirror: Personalized Display and Voice Assistant Integration

03/2021 – 07/2021

- **Voice Assistant:** Developed and implemented a voice assistant leveraging the wukong-robot [↗](#) project.
- **Prototyping:** Designed and built the hardware, integrating it into a functional smart mirror system.

SKILLS & LANGUAGE

MR Interaction Implementation

Developing built-in Mixed Reality (MR) interaction application for Quest 3

Hardware & Software Skills

- Software: Unity3D(C#), Python, Git, Matlab, Neural Network, Data Analysis
- Hardware: Electrical Muscle Stimulation, Arduino, Wearable Systems, PlatformIO

Language:

IELTS: 7 ; French:A1

AWARDS & SCHOLARSHIP

Second Prize of Guangdong Province of National Undergraduate Mathematical Contest in Modeling

09/2020

Second Prize of Guangdong Undergraduate Electronic Design Competition

11/2020

National Encouragement scholarship

2020

The Second Prize Scholarship of South China University of Technology

2019

"Hongping Evergreen Fund" Student Science and Technology Innovation Third-class Scholarship (2 items)

2020

TEACHING EXPERIENCE & SERVICE

EuroHaptics 2024

07/2024

Student Volunteer

Lille, France

Digital system design

09/2023 – 12/2023

Teaching Assistant

South China University
of Technology

Digital logic circuit

03/2023 – 06/2023

Teaching Assistant

South China University
of Technology