Jianhui YAN

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https://yimkf.github.io/

EDUCATION

Research Intern 06/2024 – 09/2024
Human Computer Interaction Lab at Saarland University Saarbrücken, Germany
Research advisor: Prof. Jürgen Steimle's

M.S. Electronic Information Engineering 09/2022 – present
School of Electronic and Information Engineering,South China University of Technology Guangzhou, China
Research advisor: Prof. Lin Shu

B.S. Information Engineering 09/2018 – 06/2022
School of Electronic and Information Engineering, South China University of Technology Guangzhou, China
GPA: 3.71/4.0

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 **Internation 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 Fehlberg, 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

UIST 2024 : EMS Hand Prop: Leveraging the Loss of SoA Caused by EMS to Make Hands Serve Better as Virtual Objects (Rejected, now has been resubmitted))
My Contributions:

- **1.** A **novel concept of leveraging the loss of SoA** caused by EMS to make the **stimulated hand serve better as a virtual object**
- 2. **Proposal** of a highly reproducible **electrode layout** with a clear anatomical guide for **actuating fingers via EMS** and **inducing** users to **pose 8 gestures** with it
- EMS actuation,
- 3. An **interaction system** that combined **EMS actuation** and **data-glove-based gesture recognition** to enable users to perform **gestural object retrieval tasks** and be involved in **interactive scenarios** easily and immersively

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

- 1. Contributing to the **idea** and the **application** of the paper
- 2. Implementing a **complex Mixed Reality (MR) Interaction** system for **Quest 3**
- 3. Participating in the **wearable mobile device** implementation, such as the communication between the computer and Quest 3

SKILLS

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

Electrical Muscle Stimulation
Actuating gestures based on EMS, Performing experiments on human hands

Computer Skills
Unity3D(C#), Python, Git, Matlab, Arduino, Neural Network

AWARDS

2020 National Undergraduate Mathematical Contest in Modeling 09/2020
Second Prize of Guangdong Province

2020 Guangdong Undergraduate Electronic Design Competition 11/2020
Second Prize

Scholarship

- **National Inspirational Scholarship**
- **2019 Second-class Scholarship of South China University of Technology**
- **2020 "Hongping Evergreen Fund" Student Science and Technology Innovation Third-class Scholarship (2 items)**
- **Lixin Stipend**

LANGUAGES

English	**Cantonese**	**French**
IELTS: 7	Native	A1

TEACHING EXPERIENCE

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

SERVICE

Student volunteer 07/2024
EuroHaptics 2024 Lille, France