Jianhui YAN

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EDUCATION

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 Ranking: 3/16

RESEARCH INTERESTS

Interfaces in Human Computer Interaction
Gestural Interaction in Spatial Computing; Tactile and Kinesthetic Rendering by Electrical Muscle Stimulation

Human-centered Computing in AR/VR
User Centered Design; Proprioceptive Feedback; Embodiment; Deep Learning in Human Computer Interaction

PROJECTS

2022 Chinese National Natural Science Foundation 10/2022 – present
Highly immersive natural human-computer interaction system with multi-channel integration of audio,visual and haptic
- took advantage of deep learning technique and data glove to perform gesture recognition
- discovered the potential of combining electrical muscle stimulation with gestural interaction
- proposed an immersive interaction system providing proprioceptive, tactile and visual feedback

China Electronics Society-Tencent Robotics X Rhinoceros Bird Special Research Plan (2022) 09/2022 – 09/2023
Research on wearable kinesthetic/tactile composite rendering technology based on microcurrent stimulation
- proposed a highly reproducible electrode placement based on hand anatomy to render kinesthetic to all five fingers.
- successfully induced users to pose a variety of gestures by electrical muscle stimulation

PUBLICATIONS

EMS-Gestures: an interface that provided proprioceptive, visual, and self-haptic feedback to participants strengthened by Electrical Muscle Stimulation
Contributed to and submitted to CSCW2024, and currently awaiting the results.
- Contributions:

1. **Transforming** the SoA caused by EMS into the enhanced proprioceptive feedback
2. **Removing the learning burden** in gesture interaction from users and **enlarging the capacity of interactive gestures**
3. **Maintaining** their gesture stable during long-term interaction

SKILLS

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

Computer Skills
Python,Matlab, C#,C++,VHDL,Unity3D,Quartus,Multism,Opensim

LANGUAGES

English
IELTS: 7

Mandarin
Native

Cantonese
Native

French
Elementary proficiency(A2)