FENG FENG, PHD

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Research Associate in HCI, School of Computer Science
University of Bristol, Queen's Building, University Walk, Bristol, UK, BS8 1TR

RESEARCH INTERESTS

Human-computer interaction (HCI), Human-robot interaction (HRI)
Multimodal, multi-sensory perception and interaction
Embodied cognition, sensorimotor system for motor training
Dynamic affordance in XR (AR, VR, mixed reality)

EDUCATION

Queen Mary University of London (London, UK) *January 2015 - Nov 2019*
PhD in Electronic Engineering, Human-Computer Interaction
Cognitive Science Research Group, Department of Electronic Engineering and Computer Science

Hunan University (Changsha, CN) *September 2011 - June 2014*
MA in Interaction Design
School of Design
(Leading design institute in China in Industrial Design and Interaction Design)

Shandong University (Jinan, CN) *September 2007 - June 2011*
Bachelor of Engineering
School of Mechanical Engineering
(Double-First Class University, Rank A)

WORKING EXPERIENCE

BIG (Bristol Interaction Group) lab, University of Bristol, Bristol August 2019 - now
Research Associate

· I'm working on developing shape-change technologies to capture and enrich multi-sensory experience in both the physical and virtual realities, and to increase educational inclusiveness for visually impaired pupils through participatory design approach with local schools.

Demand logic limited, London April 2019 - July 2019
Consultancy

· I have worked on visualising data of power consumption in London, with the purpose of indicating peak-shifting during a day, as well as proposing new business models on demand-side response. The ultimate goal of this project is to fulfil the task of zero-carbon emission by 2050.

QMUL, London Jan 2015 - June 2019
Teaching assistant

· My role as a teaching assistant was to prepare teaching materials, lead lab sessions, guide and advise students on their assignment, group projects, as well as examine project presentation and marking scripts.

RESEARCH AREA

My research is largely concerned with understanding how perception, action and cognition are laced together. My PhD work falls into two areas: multisensory embodiment and human-computer interaction (CHI). What unifies my research engagement is a focus on gestural input activities. In particular, I focus on the embodied integration process between tactile, auditory and visual perception, and how this process enhances or inhibits gesture inputs across different spatial and temporal interactive scales in the field of CHI. The ultimate goal of my research is to provide an experiential uniformity between our physical embodiment and ever-evolving digital reality.

Thesis Title: Examine the effect of crossmodal perception and implicit memory on gestural input behaviour

Field Covering: Human-computer interaction; Multi-sensory perception; Embodied cognition; Interactive affordance; Computational modelling; Tangible interaction; Motor training and assistive technology.

PUBLICATIONS

Journals

[J1]Exploring crossmodal perceptual enhancement and integration in a sequence-reproducing task with cognitive priming (Accepted by Journal on Multimodal User Interfaces)
Feng Feng, Puhong Li, Tony Stockman
DOI: 10.1007/s12193-020-00326-y

[J2]Can rhythm be touched? An evaluation of rhythmic sketch performance with augmented multimodal feedback (Under review)
Feng Feng, Shang Kai, Tony Stockman
(Submitted to Applied Ergonomics)

[J3]Concurrent crossmodal feedback assist target-searching: displaying distance information through visual, auditory and haptic modalities (Under review)
Feng Feng, Tony Stockman
(Submitted to International journal of human computer studies)

Conferences

[C1]Feng, F., & Stockman, T. (2019, April). Augmented Visuotactile Feedback Support Sensorimotor Synchronization Skill for Rehabilitation. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (p. LBW2120). ACM.
doi>10.1145/3290607.3312812

[C2]Feng, F., & Stockman, T. (2017, November). An investigation of dynamic crossmodal instantiation in TUIs. In Proceedings of the 19th ACM International Conference on Multimodal Interaction (pp. 82-90). ACM.
doi>10.1145/3136755.3136782

[C3]Feng, F., Stockman, T., Bryan-Kinns, N., & AI-Thani, D. (2015, September). An investigation into the comprehension of map information presented in audio. In Proceedings of the XVI International Conference on Human Computer Interaction (p. 29). ACM.
doi>10.1145/2829875.2829896

ACADEMIC ENGAGEMENT

Workshop hosting:
ICMI 2020 workshop on Inclusive Digital Fabrication Technologies

Reviewer for:
CHI 2020, DIS 2020 in 2020
Ubicomp/ISWC 2019, Worldhaptics 2019, ICAD 2019 in 2019
Eurohaptics 2018 in 2018

Conference organisation:
Co-chaired (Paper chair) the ICAD 2019

Research grant in preparation:
EPSRC postdoctoral Fellowships (with collaborators in University of Bristol)
National Natural Science Foundation of China - general program (as a collaborator)

PROJECTS COLLABORATORS

Bristol Interaction Group (BIG), University of Bristol, UK
Main collaborators: Dr Oussama Metatla (EPSRC research fellow), Dr Anne Roudaut (Reader in HCI), Dr Josh Taylor (Research associate)
Project: Shape-change robots for inclusive learning activities

School of Chemistry, University of Bristol, UK
Main collaborator: Dr David Glowacki (Royal Society Senior Research Fellow)
Project: Dynamic affordances in VR experience

Bristol Robotics Lab, Bristol, UK
Main collaborator: the Softlab
Project: Shape-change technologies for HCI and HRI

College of Science and Engineering, Hamad bin Khalifa University, Qatar
Main collaborator: Dr Dena Ahmed S. Al Thani
Project: Lab study on multi-sensory perception of shape-change interfaces

School of Mechanical Engineering, Shcdndong University, China
Main collaborator: Prof Fan Zhijun
Project 1: Lab study on multi-sensory perception of shape-change interfaces
Project 2: The effect of multi-sensory feedback on fine motor skill training with healthy people (Lab study) and with stroke patients (Longitudinal study)
Project 3: National Natural Science Foundation of China - general program

PROFESSIONAL MEMBERSHIP

Member of the Association for Computing Machinery (ACM) since 2017
Member of the Institution of Engineering and Technology (IET) 2015-2019

TEACHING EXPERIENCE

Co-supervision
1 MSc student - 2019

Teaching assistant
ECS 612U Interaction design - 2017/18, 2018/19
ECS 740P Database system - 2017/18
ECS 639U Web programming - 2017/18
ECS 511U Creating interactive objects - 2017/18

ECS 722U Internet-of-things technology - 2016/17
ECS 522U/ECS 744P Graphical user interfaces - 2015/16

PROGRAMMING AND DESIGN SKILLS

Programming skills

Programming language: C++ (Good), Java (Good), Python (Good), Matlab (Good), Processing (Good), Javascript (Intermediate), HTML (Good), SQL (Basic);
Hardware platform: Arduino (Good), Teensy (Good), Raspberry Pi (Intermediate), Bela (Basic)

Design skills

2D: Photoshop (Good), Illustrator (Good), Indesign (Intermediate)
3D: Fusion 360 (Good), Solidworks/ProEngineer (Intermediate), Rhinoceros (Intermediate)

PUBLIC ENGAGEMENT

First Lego League (FLL) Robotics competition
Co-organiser, robot design judge and referee for the London East, First Lego League (FLL) Robotics design competition. We hosted this event for the purpose of encouraging and engaging young talents to get more involved with STEM subjects.
The event website: https://firstlegoleague.theiet.org.
The event photos: https://www.flickr.com/photos/eecs_qmul/albums/72157703849093212

TeenTech Event
Representative of QMUL for the TeenTech Event: This event aims to present variety of science, technology and engineering in a friendly and warm approach to teenagers.
The event website: https://www.teentech.com/teentech-events/

DESIGN EXPERIENCE / INTERNSHIPS

2014: Model design for smart vehicle, Shandong University
2013: Co-founder and design of campus publication, the "The voice of YueLu", with MBA colleagues in business school, HNU
2013: Field study for future in-vehicle interaction, sponsored by SAIC-GM
2012: Designed visual identification (VI) system for the Museum of Ancient Academies in China
2012: Game developing for 2012 Tencent ISUX design hackathon
2012: Field study and co-design for IoT smart kitchen, sponsored by HNU-Olin Joint laboratory
2011: Hunan University-Nokia research institute design innovation workshop
2009-2010: Haier semantics study group for PC design

LANGUAGES

English: Fluent (Working language)
Chinese: Super (First language)
Japanese: Beginner (Simple conversation)

PERSONAL TRAITS

I have educational backgrounds in both engineering (B.Eng.), design (MA) and computer science (PhD). As a well-trained researcher, I conduct research studies in a critical and rigorous manner, while as a designer, I love to explore design spaces and to create interactive prototypes in a different mindset.

I'm highly motivated and eager to work in multi-disciplinary research fields with people who come from a diverse background. I enjoy collaboration and working in groups because I believe "the whole is greater than the sum of its parts".

I love art and history. I've been creating (and re-creating) artworks in my part-time. I'm also an amateur photographer, using a camera to log the image of the world represented in my brain.

Google scholar
https://scholar.google.co.uk/citations?user=IHMO_z0AAAAJ&hl=en&authuser=1

Linkedin
https://www.linkedin.com/in/feng-feng-308054146/

Github
https://github.com/turtle2007

Twitter
https://twitter.com/Feng58486062