Qi-Long Liu

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Google Scholar ♁ ORCID Ⓓ GitHub ⌂ Homepage ☄

EDUCATION

The Hong Kong Polytechnic University
Sep 2021 – Feb 2024
Hong Kong, China

Master of Philosophy, Laboratory for Artificial Intelligence in Design (AiDLab)
Supervised by Prof. Kit-lun Yick
Co-supervised by Prof. Joanne Yip and Dr. Yue Sun

Shenzhen University
Sep 2017 – Jul 2021
Shenzhen, China

Bachelor of Engineering, School of Biomedical Engineering
Supervised by Dr. Yongjin Zhou

AWARDS

The Hong Kong Polytechnic University Research Studentship
2021 – 2023

The Hong Kong Polytechnic University

Star of Double Innovations (Group Award)
2021

Third Prize, Shenzhen University

National College Students Biomedical Engineering Innovation Design Competition
2019

Third Prize

National College Students Electronic Design Competition
2019

Third Prize in Guangdong Province

PUBLICATIONS

Under Review

Li-Ying Zhang, Ze-Qi Ma, Kit-Lun Yick, Pui-Ling Li, Joanne Yip, Sun-Pui Ng, and **Q.-L. Liu**. Prediction of dynamic plantar pressure from insole intervention for diabetic patients based on patch-based multilayer perceptron with localization embedding. *IEEE Access (Under Review)*, 2024

Journal

Q.-L. Liu, Kit-Lun Yick, Yue Sun, and Joanne Yip. Ultra-dense motion capture: an exploratory full-automatic approach for dense tracking of breast motion in 4d. *PLOS ONE*, 19(2):e0299040, 2 2024

Jiazhen Chen, Kit-lun Yick, Yue Sun, **Q.-L. Liu**, and Joanne Yip. Construction of multi-component finite element model to predict biomechanical behaviour of breasts during running and quantification of the stiffness impact of internal structure. *Biomechanics and Modeling in Mechanobiology*, 2024

Li-Ying Zhang, **Q.-L. Liu**, Kit-Lun Yick, Joanne Yip, and Sun-Pui Ng. Analysis of diabetic foot deformation and plantar pressure distribution of women at different walking speeds. *International Journal of Environmental Research and Public Health*, 20(4):3688, 2 2023

Qiu-Qiong Shi, Pui-Ling Li, Kit-Lun Yick, Jiao Jiao, and **Q.-L. Liu**. Influence of contoured insoles with different materials on kinematics and kinetics changes in diabetic elderly during gait. *International Journal of Environmental Research and Public Health*, 19(19):12502, 9 2022

Conference

Q.-L. Liu, Kit-Lun Yick, Kam-Ching Chan, Sin-Tung Wong, and Sun-Pui Ng. Sports bra pressure: effect on core body temperature and comfort sensation. In *Ergonomics In Design*. AHFE International, 2022

Thesis

Q.-L. Liu. Ultra-dense motion capture algorithm for breast biomechanical modelling in design of sports bras, 2024

WORK & RESEARCH EXPERIENCE

The Hong Kong Polytechnic University	Sep 2023 – Present
Research Assistant (full-time)	*Hong Kong, China*
Supervised by Prof. Kit-lun Yick	
3D/4D scene reconstruction/understanding, dense motion tracking, and human pose analysis	
Shenzhen Base of The Hong Kong Polytechnic University	Dec 2020 – Jun 2021
Student Assistant (part-time) for Prof. Kit-lun Yick	*Shenzhen, Guangdong, China*
Supervised by Prof. Kit-lun Yick	
3D/4D scanning data cleansing, labelling, and processing	
Shenzhen Zhishixinyun Educational Technology Ltd.	Nov 2019 – Mar 2020
Cofounder and Python tutorial lecturer	*Shenzhen, Guangdong, China*
A campus startup that aims at providing short-term STEM and arts tutorials for college students	

OPEN-SOURCE PROJECTS *(SELECTED)*

mesh4d	2023
Toolkit for 4D (3D + T) data visualisation, operation, and dynamic estimation	*Link*
PaperThread	2023
Visualize papers' relations as threads	*Link*
FEcluster	2023
Distribute FE simulation tasks across multiple computers via SSH	*Link*
qilong-liu.vercel.app	2023
Minimalist personal blog site based on Next.js and Tailwind	*Link*
pedarProbe	2022
Data analysis framework for pedar plantar pressure sensor	*Link*
Beamer-LaTeX-Themes	2022
Customized beamer templates for PolyU, SZU, and more	*Link*

SKILL SET

Languages
English (fluent); Mandarin (native); Cantonese (native)

Programming
Python (seasoned); JavaScript (intermediate); Bash shell scripting (intermediate); C/C++ (basic); Matlab (intermediate)

Others
LaTeX (seasoned); TikZ (intermediate); Git (seasoned); Docker (basic); Next.js (seasoned); Sphinx (seasoned)