

# Qi-Long Liu

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Google Scholar  ORCID  GitHub  Homepage 

## EDUCATION

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### The Hong Kong Polytechnic University

Sep 2021 – Feb 2024

*Master of Philosophy, Laboratory for Artificial Intelligence in Design (AiDLab)*

*Hong Kong, China*

*Supervised by Prof. Kit-lun Yick*

*Co-supervised by Prof. Joanne Yip and Dr. Yue Sun*

### Shenzhen University

Sep 2017 – Jul 2021

*Bachelor of Engineering, School of Biomedical Engineering*

*Shenzhen, China*

*Supervised by Dr. Yongjin Zhou*

## AWARDS

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### 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

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### Under Review

Li-Ying Zhang, Ze-Qi Ma, Kit-Lun Yick, Pui-Ling Li, Joanne Yip, Sun-Pui Ng, and **Qi-Long 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

**Qi-Long 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, 2024

Jia-Zhen Chen, Kit-Lun Yick, Yue Sun, and **Qi-Long Liu** 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, **Qi-Long 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, 2023

Qiu-Qiong Shi, Pui-Ling Li, Kit-Lun Yick, Jiao Jiao, and **Qi-Long 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, 2022

## Conference

**Qi-Long 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

**Qi-Long Liu**. Ultra-dense motion capture algorithm for breast biomechanical modelling in design of sports bras, 2024

## WORK & RESEARCH EXPERIENCE

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

## OPEN-SOURCE PROJECTS (SELECTED)

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

## SKILL SET

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### 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)