

Qi-Long Liu

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Google Scholar  ORCID  GitHub  Homepage 

RESEARCH INTERESTS

3D computer vision; 4D scene reconstruction; Dense motion tracking; Spectral learning w/ Deep functional maps network (FMNet); Human-computer interaction.

EDUCATION

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

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

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 (*JCR Q1, IF 2.9*)

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*, 2024 (*JCR Q2, IF 3.4*)

Jia-Zhen Chen, Yue Sun, **Qi-Long Liu**, Joanne Yip, and Kit lun Yick. 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 (*JCR Q2, IF 3.0*)

Xi Chen, **Qi-Long Liu**, Lei Dong, Hu Tang, Tian-Fu Wang, and Si-Ping Chen. Construction of experimental teaching system of biomedical engineering for demand of industry. 2020 (PKU Core)

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. *MPhil thesis, The Hong Kong Polytechnic University*, 2024

WORK & RESEARCH EXPERIENCE

The Hong Kong Polytechnic University <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>
Shenzhen Base of The Hong Kong Polytechnic University <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>
Shenzhen Zhishixinyun Educational Technology Ltd. <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)

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

SKILL SET

Languages

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

Programming

PyTorch & 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)