

Qi-Long Liu

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Google Scholar  ORCID  GitHub  LinkedIn  Blog Site 

EDUCATION

The Hong Kong Polytechnic University

Master of Philosophy, School of Fashion and Textiles

Laboratory for Artificial Intelligence in Design (AiDLab)

Supervised by Prof. Kit-lun Yick, Prof. Joanne Yip and Dr. Yue Sun

Sep 2021 – Present

Hong Kong, China

Shenzhen University

Bachelor of Engineering, School of Biomedical Engineering

Supervised by Prof. Yongjin Zhou

Sep 2017 – Jul 2021

Shenzhen, China

AWARDS & HONORS

The Hong Kong Polytechnic University Research Studentship

2021-2022

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, The Teaching Steering Committee of Biomedical Engineering in Colleges and Universities of the Ministry of Education

National College Students Electronic Design Competition in Guangdong Province

2019

Third Prize, The Organizing Committee of the Guangdong Province Division of the National Undergraduate Electronic Design Competition

PUBLICATIONS

Journal

Q.-l. Liu, K.-l. Yick, Y. Sun, and J. Yip, "Ultra-dense motion capture: an exploratory full-automatic approach for dense tracking of breast motion in 4d," *PLOS ONE*, vol. 19, no. 2, Y. Lu, Ed., e0299040, Feb. 2024, issn: 1932-6203. doi: 10.1371/journal.pone.0299040. [Online]. Available: <http://dx.doi.org/10.1371/journal.pone.0299040>.

L.-Y. Zhang, Q.-L. Liu, K.-L. Yick, J. Yip, and S.-P. Ng, "Analysis of diabetic foot deformation and plantar pressure distribution of women at different walking speeds," *International Journal of Environmental Research and Public Health*, vol. 20, no. 4, p. 3688, Feb. 2023. doi: 10.3390/ijerph20043688. [Online]. Available: <https://doi.org/10.3390/ijerph20043688>.

Q.-Q. Shi, P.-L. Li, K.-L. Yick, J. 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*, vol. 19, no. 19, p. 12 502, Sep. 2022. doi: 10.3390/ijerph191912502. [Online]. Available: <https://doi.org/10.3390/ijerph191912502>.

Conference

Q.-L. Liu, K.-L. Yick, K.-C. Chan, S.-T. Wong, and S.-P. Ng, "Sports bra pressure: effect on core body temperature and comfort sensation," in *Ergonomics In Design*, AHFE International, 2022. doi: 10.54941/ahfe1001991. [Online]. Available: <https://doi.org/10.54941/ahfe1001991>.

Thesis

Q. Liu, “Ultra-dense motion capture algorithm for breast biomechanical modelling in design of sports bras,” MPhil thesis, The Hong Kong Polytechnic University, 2024.

OPEN-SOURCE PROJECTS (*SELECTED*)

FEcluster <i>Distribute FE simulation tasks across multiple computers via SSH</i>	2023 <u>Link</u>
mesh4d <i>Toolkit for 4D (3D + T) data visualisation, operation, and dynamic estimation</i>	2023 <u>Link</u>
qilong-liu.vercel.app <i>Minimalist personal blog site based on Next.js and Tailwind</i>	2023 <u>Link</u>
pedarProbe <i>Data analysis framework for pedar plantar pressure sensor</i>	2022 <u>Link</u>
mobjTOB <i>Self-customized Manim mobjects for visualizing Machine Learning framework e.g. MLP, CNN, and Transformer</i>	2022 <u>Link</u>
Beamer-LaTeX-Themes <i>Customized beamer templates for PolyU, SZU, and more</i>	2022 <u>Link</u>

SPECIALIZED SKILLS

Languages

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

Programming Languages

Python (seasoned); Matlab (intermediate); JavaScript (intermediate); C/C++ (basic); Shell Scripting (intermediate);

Technical Stacks

Data Processing & Visualization with Python (seasoned); LLM Application with LangChain & OpenAI API (intermediate); Machine Learning with PyTorch (intermediate); Web development with Next.js (intermediate); Desktop/Mobile Application with Electron/Reactive Native (basic); Finite Element Modelling (basic)

Tool Set

Documentation with Sphinx & ReadTheDocs (experienced); Version Control with Git & GitHub (experienced); Typesetting with L^AT_EX (experienced)

WORK EXPERIENCE

Shenzhen Base of The Hong Kong Polytechnic University

Student Assistant (part-time)

Dec 2020 – Jun 2021

Shenzhen, Guangdong, China

Shenzhen Zhishixinyun Educational Technology Ltd.

Software Engineer (internship)

Nov 2019 – Mar 2020

Shenzhen, Guangdong, China