

YI, Yueyang

Updated October 29, 2024

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Research interests Human dynamics, coupled human-natural systems, computational models.

Education **Georgia Institute of Technology** Atlanta, US
Online Master of Science in Computer Science Aug. 2024 – Present

Katholieke Universiteit Leuven Leuven, Belgium
Master of Science in Statistics and Data Science Oct. 2018 – July 2023
Thesis: *Improving population mapping with night-time lights: a Bayesian spatio-temporal approach with SPDE-INLA.*

University College London London, UK
Master of Science in Earthq. Eng. with Disaster Mgmt. Sep. 2017 – Jan. 2019
Thesis: *A night-time-light-based framework for the large-scale monetary fluvial flood risk assessment and mapping.*

The University of Sheffield Sheffield, UK
Bachelor of Engineering in Civil Engineering Sep. 2014 – June 2017
Thesis: *Smoothed-particle hydrodynamics modelling of free surface flows.*

Editorial **Yi, Y.** and Lam, T.Y.T. (2024) 'How close are we from achieving demographic diversity in clinical trials? Insights from Singapore' [Editorial], *Annals, Academy of Medicine, Singapore*, 53(7), pp. 407-409. doi: <https://doi.org/10.47102/annals-acadmedsg.2024226>

Conference talks **Yi, Y.**, Zhu, Z., Meijer, R. and Zhou, Y. (2024) 'Silent majority from rural India: Where are they now?' [Oral presentation], *NetMob 2024*. Washington, D.C., 7-9 October. Available at: https://netmob.org/book/BookAbstracts_Netmob24.pdf

Lam, T.Y.T., **Yi, Y.**, Choi, K.C., Lui, R.N. and Sung, J.J.Y. (2024) 'Long-term effect of colorectal cancer screening by colonoscopy vs fecal immunochemical test in Chinese population: A cohort study with a median follow-up of 14 years' [Oral presentation], *Digestive Disease Week 2024*. Washington, D.C., 18-21 May. doi: [https://doi.org/10.1016/S0016-5085\(24\)00594-8](https://doi.org/10.1016/S0016-5085(24)00594-8)

Conference posters Meijer, R., **Yi, Y.**, Zhou, Y. and Zhu, Z. (2024) 'Unfolding human mobility patterns in response to catastrophes' [Poster], *NetMob 2024*. Washington, D.C., 7-9 October. Available at: https://netmob.org/book/BookAbstracts_Netmob24.pdf

Yi, Y., To, Z., Guo, Y. and Lam, T.Y.T. (2024) 'Clinical effectiveness of artificial intelligence in optical diagnosis of diminutive colorectal lesions: A systematic review and meta-analysis' [Poster], *International Digestive Disease Forum 2024*. Hong Kong, 10-11 August. doi: <https://doi.org/10.1136/gutjnl-2024-IDDF.319>

Yi, Y., To, Z., Guo, Y. and Lam, T.Y.T. (2024) 'Real-time use of artificial intelligence in characterisation of diminutive polyps during colonoscopy: A systematic review and meta-analysis' [Poster], *Digestive Disease Week 2024*. Washington, D.C., 18-21 May. doi: <https://doi.org/10.1016/j.gie.2024.04.714>

Lam, T.Y.T., Yi, Y., Cheung, M.F.K., Goh, W.W.B. and Sung, J.J.Y. (2024) 'Acceptance and trust of artificial intelligence in clinical practice among gastroenterology nurses' [Poster], *Digestive Disease Week 2024*. Washington, D.C., 18-21 May. doi: [https://doi.org/10.1016/S0016-5085\(24\)02523-X](https://doi.org/10.1016/S0016-5085(24)02523-X)

Work in progress

What factors influence the use of artificial intelligence by gastroenterology nurses in clinical practice? A cross-sectional multi-centre survey, ready to submit, with Thomas Lam.

Developing and validating a risk score to predict clinically significant prostate cancer among Asian men, ready to submit, with Thomas Lam.

Usage of Internet to promote healthy lifestyle among antenatal women: A structural equation modelling approach, ready to submit, with Ying Lau.

Clinical effectiveness of artificial intelligence in optical diagnosis of neoplastic colorectal polyps during colonoscopy, in preparation, with Thomas Lam.

High-resolution population estimation exploiting census and household survey: A Bayesian spatial model with SPDE-INLA, in preparation, with Thomas Neyens.

Research experience

Stanley Ho Big Data Decision Analytics Research Centre

The Chinese University of Hong Kong
Research assistant, with Prof Thomas Y.T. Lam

Hong Kong SAR

Aug. 2023 – Present

Projects: risk score developments for multi-cancer screening (diagnostic performance analysis; cost-effectiveness analysis; clinical decision-makings); cancer risk factor associations (dose-response analysis; cohort study; case-control study); long-term retrospective study on cancer screening strategies (electronic medical record analysis; survival analysis); AI for medicine (diagnostic performance analysis; cost-effectiveness analysis; randomised controlled trial; meta-analysis); nursing (causal analysis; survey).

Water Equity Lab

The University of California, Irvine Irvine, US
Visiting researcher, with Prof Maura Allaire July 2019 – Aug. 2019
Projects: comparative studies on economic and engineering understandings on monetary risk of disasters; flood insurance popularisation (quasi-experimental design with difference-in-differences and propensity score matching).

Industry experience

United Nations ESCAP, IDD/IDS Bangkok, Thailand
Intern June 2022 – Nov. 2022
Projects: Asia-Pacific Information Superhighway (look-up tool for ICT-related databases and publications; website development); digital climate data analysis; digital connectivity data analysis.

SCOR, R&D London, UK
Intern June 2018 – Aug. 2018
Projects: interactive platform for catastrophic loss mapping (disaster catalogue collection; cartographic standard establishment; quality assurance and quality control; geospatial data analysis and visualisation).

Lantian Civil Engineering Technology Nanjing, China
Intern July 2016 – Aug. 2016
Projects: foundation pit excavation monitoring (settlement observation); pile foundation testing (low-strain detection; static load experiment).

Training

Peking University ISSS Special Training Course on Causal Inference 2024

Skills

Programming

Proficient in: R (ANOVA, linear regression, generalised linear regression, time series models, survival analysis, robust statistics, Bayesian statistics, mixed effects models, nonparametric statistics, spatial and spatiotemporal models, meta analysis), SAS (sampling, multivariate statistics).

Familiar with: Python (network science, stochastic models, web scrapping, textual mining, interactive plotting), Stata (causal inference), MATLAB (basics).

Software

Statistics: BUGS, JAGS, INLA (Bayesian statistics), JMP (experimental design).

Civil Engineering: AutoCAD, GSA, SPHysics, LimitState:Geo

Earthquake Engineering: SeismoStruct, SeismoSignal, SeismoMatch, FRACAS, FLAC 2D, GaLa, REXEL, ETABS, PACT, DEEPSOIL

Geographic information systems: QGIS, ArcGIS.

Cloud: Alibaba Elastic Compute Service (ECS).

Productivity: Microsoft Office, R Markdown, \LaTeX .

Languages

Mandarin (native), English (fluent), French (CEFR A2).