

# Curriculum Vitae

## LAU, Man Kit

### Contact Information

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### Profile

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I worked as a full-time Instructional Assistant in the Computer Science and Engineering department at The Hong Kong University of Science and Technology since September 2007. During this time, I pursued my M.Phil and Ph.D degrees on a part-time basis, specializing in Computer Science and Engineering, at The Hong Kong University of Science and Technology. As an Instructional Assistant, my responsibilities encompassed teaching classes, designing and grading assignments and exams, contributing to course development, and Jupas interviews.

Starting in January 2022, I worked as a full-time Visiting Fellow at the Information Systems department of City University of Hong Kong. As a Visiting Fellow, my duties included serving as a course leader/instructor and undertaking various administrative tasks such as Jupas interviews, coordinating PhD qualifying exams, and providing assistance during PhD oral defenses. I was reappointed as a Teaching Consultant in January 2025, and subsequently transitioned to Instructor II in September 2025, maintaining the same duties.

I am passionate about both teaching and research, with a strong commitment to prioritizing the needs of my students. While my research interests encompass several areas, including generative engine optimization, generative AI algorithms, computational geometry, self-improving algorithms, graph theory, machine learning, and surface reconstructions, my foremost dedication lies in delivering high-quality education and fostering a supportive learning environment.

### Educational Qualifications

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Ph.D.	2020	Department of Computer Science and Engineering, The Hong Kong University of Science and Technology Thesis title: <i>Exploiting Query Distribution in Planar Point Location</i> Dissertation Committee: Prof. Siu-Wing CHENG (supervisor), Prof. Mordecai Jay GOLIN, Prof. Ke YI, Prof. Hee-Kap AHN and Prof. Beifang CHEN
M.Phil.	2012	Department of Computer Science and Engineering, The Hong Kong University of Science and Technology Thesis title: <i>Denoising for Surface Reconstruction</i> Dissertation Committee: Prof. Siu-Wing CHENG (supervisor), Prof. Ke YI and Prof. Chiew-Lan TAI
Bachelor of Engineering	2007	Department of Computer Engineering, The Hong Kong University of Science and Technology

## Work Experience

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2025 Sep -	Teaching Consultant in Information Systems department, City University of Hong Kong
2025 (Jan to Aug)	Teaching Consultant in Information Systems department, City University of Hong Kong
2022-2024	Visiting Fellow in Information Systems department, City University of Hong Kong
2007-2021	Instructional Assistant in Computer Science and Engineering department, The Hong Kong University of Science and Technology

## Teaching Experience

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### Postgraduate Courses

- Large Language Model with Prompt Engineering for Business (2025 - 2026)
- Java Programming for Business Applications (2022 - 2026)
- Database Management Systems (2022)
- Advanced Algorithms (2020)

### Undergraduate Courses

- Data Visualization (2022 - 2026)
- Database Management Systems (2020, 2021, 2024 - 2026)
- Java Programming for Business (2022 - 2026)
- Search Engine Optimization (2022 - 2026)
- Introduction to Business Programming in Python (2023, 2024)
- Information Management (2024)
- Discrete Mathematical Tools for Computer Science (2010 to 2021)
- Design and Analysis of Algorithms (2009 to 2021)
- Python Programming Bridging Course (2021)
- C Programming Bridging Course (2016, 2021)
- Java Programming Bridging Course (UG course) (2016, 2020)
- Internet Computing (2014, 2016, 2017, 2018)
- Java Programming (2010)
- Operating Systems (2008, 2009)
- Exploring Multimedia and Internet Computing (2008, 2009)
- Computer and Programming Fundamentals I (2008)
- Computer Communication Network I (2008)
- Object-Oriented Programming (2008)
- Programming Fundamentals and Methodology (2007)
- Industrial Training - Linux Administration (4-days training) (2017, 2018, 2019)
- Industrial Training - Linux Network Administration (4-days training) (2019)

### Courses development

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- Large Language Model with Prompt Engineering for Business (2025)
- Search Engines for Web and Enterprise Data (Summer 2019)

### Research & Teaching Grant

- Project Title: A Generative Engine Optimization (GEO) Simulation Platform for Learning the Next-Generation Digital Visibility Strategy
  - Grant: Teaching Development Grant (TDG), City University of Hong Kong (CityU)
  - Role: Principal Investigator
  - Status: Shortlisted (Minor Revision under review, 2026)

### Publications

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#### Refereed Journal Articles

1. Siu-Wing Cheng and Man-Kit Lau.  
*Dynamic Distribution-Sensitive Point Location.*  
ACM Transactions on Algorithms, volume 18, issue 1, December 2021, article no. 3.
2. Siu-Wing Cheng and Man-Kit Lau.  
*Adaptive Planar Point Location.*  
SIAM Journal on Computing, 50 (2021), 1200-1247.
3. Siu-Wing Cheng and Man-Kit Lau.  
*Adaptive Point Location in Planar Convex Subdivisions.*  
International Journal of Computational Geometry and Applications, 27 (2017), 3-12, special issue for the 26th International Symposium on Algorithms and Computation (ISAAC), 2015.
4. Siu-Wing Cheng, Joingxin Jin, and Man-Kit Lau.  
*A Fast and Simple Surface Reconstruction Algorithm.*  
ACM Transactions on Algorithms, volume 13, issue 2, March 2017, article no. 27.

#### Refereed Conference Articles

1. Siu-Wing Cheng and Man-Kit Lau.  
*Dynamic Distribution-Sensitive Point Location.*  
Proceedings of the 36th International Symposium on Computational Geometry (SOCG), 2020.
2. Siu-Wing Cheng and Man-Kit Lau.  
*Adaptive Planar Point Location.*  
Proceedings of the 33rd International Symposium on Computational Geometry (SOCG), 2017, 30:1-15.
3. Siu-Wing Cheng and Man-Kit Lau.  
*Adaptive Point Location in Planar Convex Subdivisions.*  
Proceedings of the 26th International Symposium on Algorithms and Computation (ISAAC), 2015, 14-21.

4. Siu-Wing Cheng, Jiongxin Jin, and Man-Kit Lau.  
*A Fast and Simple Surface Reconstruction Algorithm.*  
Proceedings of the 28th Annual Symposium on Computational Geometry (SOCG),  
2012, 69-78.

## **Professional Development**

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- Completed the course "Technical Fundamentals of Generative AI" from Stanford Online in December 2024.
- Led and advised a student team on a Generative Engine Optimization (GEO) project admitted to HKSTP Ideation.
- From 2010 to 2021, I undertook several freelance projects involving website development, mobile application development, and database management for SMEs.