

# 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 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 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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- 2022- 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

- Java Programming for Business Applications (2022, 2023, 2024)
- Database Management Systems (2022)
- Advanced Algorithms (2020)

### Undergraduate Courses

- Information Management (2024)
- Introduction to Business Programming in Python (2023)
- Search Engine Optimization (2022, 2023)
- Java Programming for Business (2022, 2023)
- Data Visualization (2022, 2023, 2024)
- Database Management Systems (2020, 2021)
- 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

- Search Engines for Web and Enterprise Data (Summer 2019)

## 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.

### **Other Achievements**

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- Aloha Group Limited is an SEO and digital marketing tech company based in Hong Kong. In 2024, I successfully established a partnership between Aloha Group Limited and the Information Systems Department of City University of Hong Kong. As a result, Aloha Group Limited will provide projects for our students, deliver talks about SEO to our students, and prioritize the hiring of interns and fresh graduates from our IS program.
- HKT is a leader in technology, media, and telecommunications, with a history of over 150 years in Hong Kong. From 2018 to 2021, I worked as a project-based freelance consultant, providing valuable insights and advice on various HKT projects, includes but not limited to:
  - Video Centrex – Artificial Intelligence
  - Big Data Analytics & AI Aided Telecom Operation
  - Smart DDoS detection and blackhole automation
- From 2010 to 2021, I undertook several freelance projects involving website development, mobile application development and database management for various small companies.