THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

Department of Computing
電子計算學系

# PhD Student Recruitment 2023

## Top in the World and Asia

The Hong Kong Polytechnic University (PolyU) is a world-class and top Asian education and research institution. The Department of Computing (COMP) ranks among the **top 100** in computer science on the major world university rankings. It ranks 34th (top 5%) in the USNEWS Ranking in 2023, 44th (top 9%) in Global Ranking of Academic Subjects by Shanghai Ranking in 2022, and 79th (top 8%) in THE Ranking in 2023.

## Making A Difference with Superb PhD Experience

All-round development is essential in the PhD study. With a proud history of over 48 years, COMP understands the importance of complementary roles between research excellence and the study experience. We not only provide the necessary conditions for PhD study such as holistic academic culture, research environment, extensive networks and resources, but also spare no effort to reinforce the **independent research capacity** of our PhD students, foster **peer learning** and create **opportunities for aspiring younger generations to shine**.

As a PhD student in COMP, you would gain much more than just the research experience of meeting professors and peer students who share common values and visions. Your creativity would be ignited, your strengths could be amplified, your networks could be expanded, which will benefit you in your lifetime.

**34th** U.S.News & World Report — 2023 World Ranking in Computer Science

**44th** Shanghai Ranking — 2022 World Ranking in Computer Science & Engineering

**79th** THE World University Rankings — 2023 World Ranking in Computer Science

**151 - 200th** QS World University Rankings — 2023 World Ranking in Computer Science & Information Systems

## About PolyU

With over 85 years of proud tradition and ranking among the world's top 100 institutions, PolyU strives in inter-disciplinary research and impactful innovations to address real-world challenges. Our researchers are developing breakthrough ideas, fostering sustainability, lifting economic outcomes and improving communities' lives for the benefit of Hong Kong, the Nation and the world. PolyU's latest ranking in 2023:

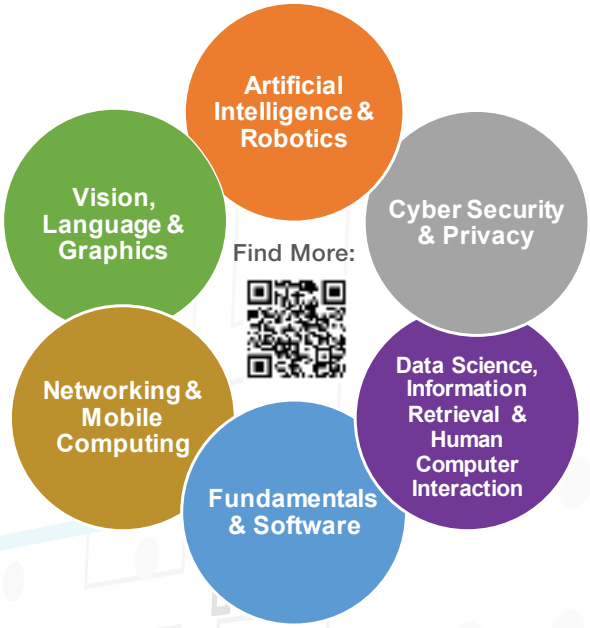
**26th** QS Asia University Rankings 2023

**65th** QS World University Rankings 2023

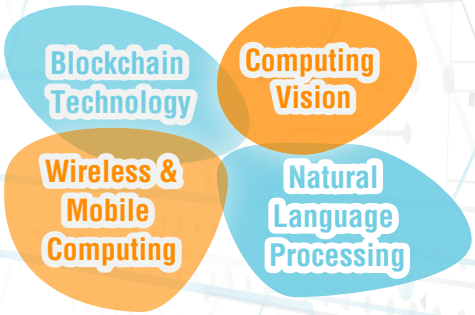
## Lay the Cornerstone for a Bright Future

# Multidisciplinary Research at the Forefront of Computer Science

COMP concentrates on high-quality, interdisciplinary research which aims at creating new computing related knowledge and benefits for the entire world. The strengths of our faculty members and research personnel are extensive so that six groups of clearly defined Research Groups are formed to facilitate efficient knowledge sharing. Our research groups produce **globally recognised research achievements**, including winning competitive research grants, publications in prestigious journals, research papers presented at top conferences and collaborations with industry giants. In the past five years, over 570 and 760 research papers were published in conferences and referred journals, respectively.




## Highlighted Research Areas




## Awards and Recognition

- One Gold Medal and two Silver Medals, 48th International Exhibition of Inventions Geneva (2023)
- Plonk-DIZK GPU Acceleration, Zprize (2023)
- Test of Time Award, ACM Conference on Embedded Networked Sensor Systems (SenSys) 2022
- ACM SIGMOD Research Highlight Award, Association for Computing Machinery 2022
- 2020 Tencent Rhino-Bird Fund – Excellence Award, China Computer Federation (CCF) & Tencent Inc (2021)
- 2020 Tencent Rhino-Bird Fund –Cooperation Award, China Computer Federation (CCF) & Tencent Inc (2021)
- Two Gold Medals and one Silver Medal, China (Shanghai) International Exhibition of Inventions (2021)
- Pilot fund 'Science communication by scientists: Appreciated!', The Royal Netherlands Academy of Arts and Sciences (2021)
- Gold Medal, 2nd Asia Exhibition of Inventions Hong Kong (2019)
- First Prize, 2019 Smart Medical Challenge (2019)
- Second Prize, ACM MM 2019 Multimedia Grand Challenge of AI Meets Beauty (2019)
- Silver Medal Award, The 47th International Exhibition of Inventions of Geneva (2019)
- Second-class Award in Natural Science, Higher Education Outstanding Scientific Research Output Awards (Science and Technology) 2018 (2019)
- The Best Partner Award in Alibaba-Academic Collaboration, Alibaba (2019)

*Format: Award, Awarding Event/ Organisation (Awarded Year)

**39 Best Paper Awards or equivalent**
in international or national conferences and journals from 2018/19 to 2022/23

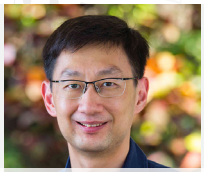
# Strong Academic Team

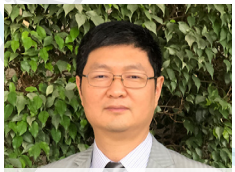
Inspired by our enthusiastic academic staff, you will receive the greatest guidance that suits you best.*

Prof. LI Qing
Chair Professor

Prof. CAO Jiannong
Chair Professor

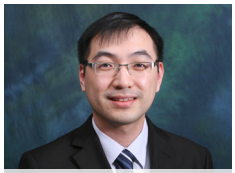
Prof. CHEN Changwen
Chair Professor


Prof. TAN Kay Chen
Chair Professor


Prof. ZHANG Lei
Chair Professor

Prof. ZHANG Weixiong
Chair Professor

Prof. RAYNAL Michel
Chair Professor


Prof. AU Man Ho
Professor

Prof. HOORN Johan
Professor

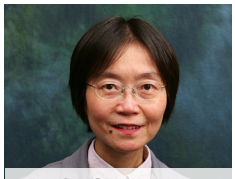
Prof. LI Wenjie
Professor

Prof. LUO Xiapu
Professor

Prof. PATHAK Ajay Kumar
Professor

Prof. WANG Dan
Professor

Prof. XIAO Bin
Professor


Prof. YOU Jia Jane
Professor

Dr CHAN Chun Bun
Associate Professor

Dr LEONG Hong Va
Associate Professor

- **6** IEEE Fellows
- **3** Members of Academia Europaea
- **1** ACM Distinguished Members
- **1** IET/IEE Fellow
- **1** IAPR Fellow
- **1** SPIE Fellow

*Just to mention some of our academic staff.

# Talent Students and Researchers

During the PhD study, in addition to the guidance of supervisors, **constructive exchange of ideas, discussion and mutual learning** among peers will also affect the research accomplishments. Your horizon will become broader from communication with people of different cultural and academic backgrounds, and new thoughts will emerge.

Approximately 120 research personnel and 300 research students conduct research at COMP in the same period every year. The group comprises local students in Hong Kong, students from mainland China and international students. Not a few of them come from top universities in China, such as Peking University, Tsinghua University, Zhejiang University etc. In recent years, we have successfully attracted about a dozen elite students via Hong Kong PhD Fellowship Scheme, who targeted the **unique talent ecosystem** in PolyU and decided to start their PhD training here.

**~120**
Research Personnel

**~300**
Research Students

- ✓ Exchange of Ideas
- ✓ Mutual Learning
- ✓ New Insight

# New Generation of Researchers

Many young researchers possess great research and academic ability and their opinions are substantial in the era of rapid development in technology. Apart from PhD training, we **continue the support to our students after graduation**. Seven Research Assistant Professors of COMP were the PhD graduates of our department. Meanwhile, we are actively expanding our research team **empowering young scholars** from all over the world to create impacts and inject impetus into the field.

# Career Prospects

COMP treasures research, academia-industry cooperation and cross-disciplinary development. Many research graduates of our department have built their careers in world-famous companies such as **Microsoft**, **Google**, **Facebook**, **Yahoo!**, **Tencent**, **Alibaba** and **DJI** etc.

Some doctoral graduates continue research or hold **academic positions** in universities worldwide, including University of Sydney, University of Waterloo, Hong Kong Polytechnic University, City University of Hong Kong, Hong Kong Baptist University, Zhejiang University, Sun Yat-Sen University, Southern University of Science and Technology, Xi'an Jiaotong University University, etc.

## Our Outstanding Alumni

*"As the cross of East and West, the culture of Hong Kong impressed me very deeply and the life in Hong Kong made me more compatible with others and more resilient to difficulties. I am very grateful to COMP and Hong Kong. The PhD study experience would be the fortune that I cherish in all my life."*

**Full Professor and Associate Dean of Computer Science and Engineering at Sun Yat-sen University, China**
Ph.D, The Hong Kong Polytechnic University (2007)

Dr Wu Weigang

*"The courses offered in COMP were practical and useful, the programme syllabus was adaptive and market-sensitive to meet the fast-changing requirements of the discipline which helped raise our competitiveness in market."*

**Founder & CEO of MEGA Automation Ltd. and Shenzhen FUSQUARE Technology Ltd.**
BSc in Information Technology, The Hong Kong Polytechnic University (2009)
Ph.D, The Hong Kong Polytechnic University (2015)

Dr Abraham Lam

## Excellent Research Environment & Competitiveness Networks

COMP owns world-class laboratories and the first University Research Facility in Big Data Analytics in Hong Kong, providing solid hardware support for **cross-disciplinary research** and teaching activities. Besides, our extensive network across the globe underpins insightful discussion and international joint work with scholars, enables **exchanges with top universities** such as MIT, CMU and Imperial College London and fosters cooperation with enterprises and industrialisation. Moreover, the **close ties between the department and alumni** help research students to build social networks with influential persons, backing up their career paths.

## City Centre & Proximity to Greater Bay Area

In COMP, students can gain experience beyond academic pursuit. They could build up an international social circle during the residential life feels like home. The campus is located in the centre of Hong Kong with proximity to High-Speed Rail Station, Tsim Sha Tsui and the renowned Victoria Harbour. **Superior geographical location and transportation networks surrounding PolyU** would enable students to travel to most locations in Hong Kong, including the airport, within one hour. The campus entrance is next to the railway line connecting China's border. Students can easily explore different areas of Hong Kong and visit other cities in the Greater Bay Area.

To address the needs of diligent students, besides the school library, swimming pools and fitness rooms on the PolyU campus, there are also a collection of international cuisines at affordable prices. Besides, there are resident districts and mega shopping malls near the campus, **allowing students to quickly adapt to the independent life in Hong Kong and focus on academics**.

# Fellowship and Scholarships

PolyU offers exceptional fellowships and scholarships to our PhD students, guaranteeing their study here. The followings are the remuneration packages of different schemes and the admission requirements.

| Schemes | Annual Studentship | Conference Grant | Cash Award | Tuition Waiver* | Selection Criteria |
|---|---|---|---|---|---|
| Hong Kong PhD Fellowship Scheme (HKPFS) | Up to **HK$331,200** | **HK$13,800** per year during normal study period | **HK$40,000** in the first year<br>**HK$20,000** from the second year to end of normal study period | **Yes** | • Academic excellence;<br>• Research ability & potential;<br>• Communication & interpersonal skills;<br>• Leadership abilities |
| PolyU Presidential PhD Fellowship Scheme (PPPFS) | Up to **HK$327,480** | **HK$25,000** for the entire normal study period | **HK$40,000** in the first year<br>**HK$20,000** from the second year to end of normal study period | **Yes** | |
| PolyU Research Postgraduate Scholarship (PRPgS) | Up to **HK$221,640** | **HK$25,000** for the entire normal study period | N/A | N/A | The quality of applicants in terms of academic merits and research potential |

*Annual tuition fee is HK$42,100

# Admission Requirements & Application

- an MPhil or a research postgraduate degree with a dissertation as an award requirement, conferred by a recognised university (for 3-year PhD programmes); or
- a Bachelor's degree with First Class Honours, or a Master's degree, conferred by a recognised university (for 4-year PhD programmes).
- Proficient in English language
  - IELTS >= 6.5; or
  - TOEFL >=550 for paper-based test; or
  - TOEFL >=80 for internet-based test;
  - Exempted for candidates who have obtained a degree awarded by institutions where the medium of instruction was English)

***Apply Now!***

**Please contact our Professors for consultancy before application.**
(https://www.polyu.edu.hk/comp/people/academic-staff/)

## Enquiry

Tel: (852) 3400-3145
Email: comp.phd@polyu.edu.hk

Please visit https://polyu.hk/sCKWA for more information.

Contents of this publication are subject to review and change.
(September 2023)