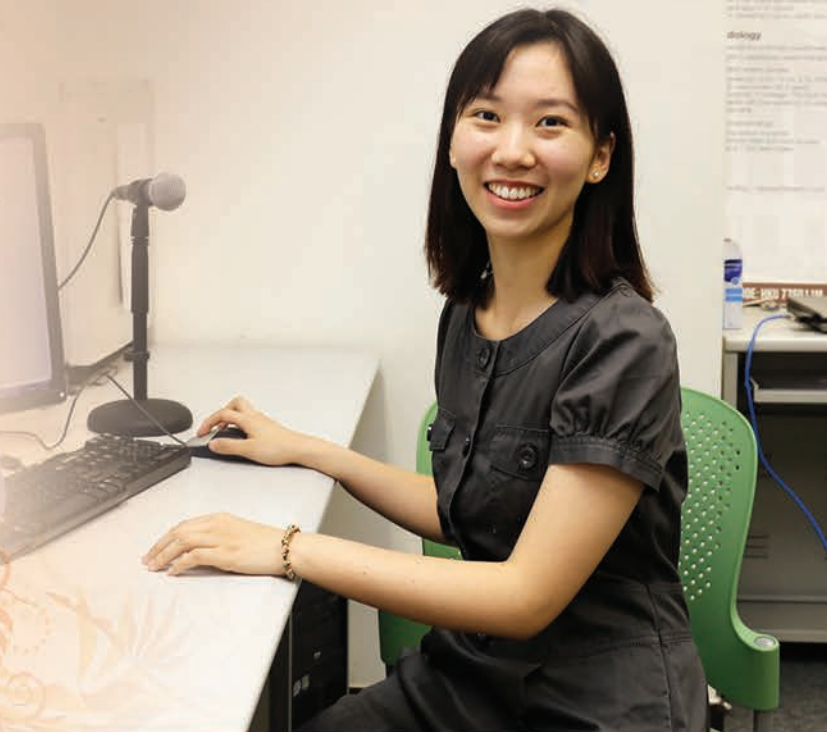


PhD Candidate Receives Fulbright - RGC Hong Kong Research Scholar Award for Dissertation Research in the US

Congratulations to Kammy Hiu Fung Chan – a PhD student in the Faculty of Education – for receiving the Fulbright-RGC Hong Kong Research Scholar Award 2019-20 to conduct research in the United States on the topic “Evaluation of Speech-Specific Quality of Life and Analysis of Risk Factors in Patients after Total Laryngectomy Based on Subjective and Objective Outcomes”. She will undertake her research in the Department of Otolaryngology – Head and Neck Surgery at the University of California, San Francisco under the supervision of Ms Sarah L. Schneider. Kammy’s research aims to identify the factors impacting proficient communication with alaryngeal speech in Cantonese-speaking patients after total laryngectomy. Specifically, she aims to find out how different types of alaryngeal speech affect quality of life.

The Fulbright-RGC Hong Kong Research Scholar Award programme was launched by the Research Grants Council (RGC) in collaboration with the US Consulate General in Hong Kong, supported by commercial donors solicited by the Hong Kong-America Center, to enable doctoral candidates in Hong Kong to conduct their dissertations in elite institutions in the US.



New Dean of Graduate School



The Graduate School is pleased to announce that Professor Frederick K.S. Leung has been appointed as the Dean of the Graduate School with effect from September 1, 2019.

Professor Leung is Professor, Chair of Mathematics Education and holder of the Kintoy Professorship in Mathematics Education. He was Dean of Education from 1996 to 2002, Associate Dean of the Graduate School from 2009 to 2010, and Master of St. John’s College from 1987 to 1990. Currently he is Member of the Academic Board and Member of the Budget and Resources Committee of HKU. Professor Leung is a leading scholar in comparative mathematical education and has received many global and local awards such as Fulbright Senior Scholar in 2003, the Hans Freudenthal Medal from the International Commission for Mathematical Instruction in 2013, Changjiang Scholar in 2014, and the Bronze Bauhinia Star in 2017.

Our warmest welcome is extended to Professor Leung. We would also like to take this opportunity to thank our former Dean, Professor M.L. Chye, for her valuable contributions to the Graduate School from May 2016 to August 2019.

HKU Students Shine at University Student Innovation and Entrepreneurship Competition

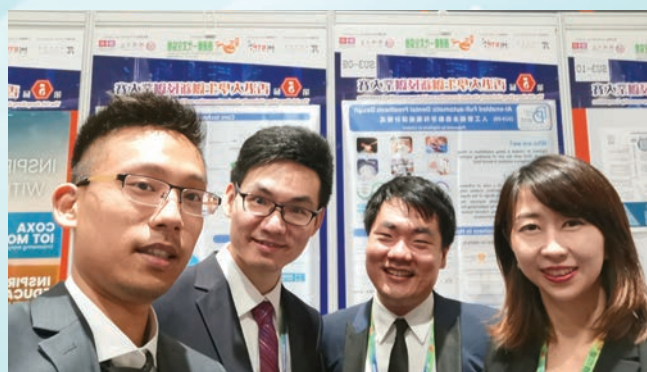
HKU students won sixteen awards at the 5th Hong Kong University Student Innovation and Entrepreneurship Competition, held in May 2019. Research postgraduate (RPg) students received one First Prize and two Second Prizes under the 'Innovation' section and a First and Second Prize under the 'Entrepreneurship' section.

Yingguang Zhang and Yu Ho Kwok – PhD candidates in the Department of Mechanical Engineering – designed a portable mechanically rechargeable aluminium-air battery that makes use of kitchen foil, waste aluminium and paper. With specially developed aluminium ink and carbon ink, batteries can be tailor-made on different water absorbing materials in different sizes, shapes and power outputs. The product not only brings economic and environmental benefits but also draws the public's attention to using renewable energy technologies. It won First Prize in the Energy, Environmental and Chemical Engineering Category.

The malignant spread of cancer cells is the major cause of tumour-related diseases. Invadosomes are phosphatidylinositol-rich adhesions that are usually found in invasive cancer cells and play important roles in cancer metastasis. PhD candidates Yage Zhang (Department of Mechanical Engineering), Fakun Cao and Yuhuan Zhou (both of the School of Biomedical Sciences) identified membrane-bound molecular motors myosin-1e as a key factor in regulating phosphatidylinositol signalling and invadosome formation. Inhibition of invadosome formation provides a potential therapeutic approach to suppress cancer cell migration. Their research received Second Prize in the Life Sciences Category.

In the Information Technology Category, PhD student Zhixi Li (Department of Electrical and Electronic Engineering) won Second Prize with his design of an innovative FinTech system, which is the first attempt to combine and apply artificial intelligence (AI) algorithms and blockchain technologies for financial investment management. Few studies to date have proposed such a complex system, and the system is promising in academic research as well as industrial application.

The AI Academy, the First Prize winner in the Growth Enterprise Category under the 'Entrepreneurship' section, is an



From left: Shengzhi Qin, Hao Ding, Muzhi Ma and Ting Wang

edutech start-up by a group of HKU students and alumni – including PhD student Zhong Shen (Department of Mechanical Engineering) – working to inspire tomorrow's leaders to get in touch with, think about, and use AI for social good. The AI Academy empowers high school students to develop programming skills, computational thinking, and a creative mindset to become creators with AI technology through different courses and products such as an online learning platform and educational robots.

Second Prize in the Start Up Category went to the project 'AI-enabled full-automatic dental prosthesis design' by Hao Ding, Muzhi Ma, Ting Wang, PhD students in the Faculty of Dentistry and Shengzhi Qin, PhD student in the Department of Computer Science. Dental laboratories and industry have long encountered problems related to accuracy, sensitivity and robustness of the stone moulds, and the work flows are tedious, time consuming and costly. The team is pioneering a software approach based on machine learning algorithms to achieve a fully automatic design of dental prosthesis.

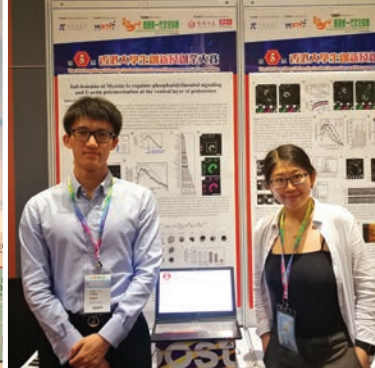




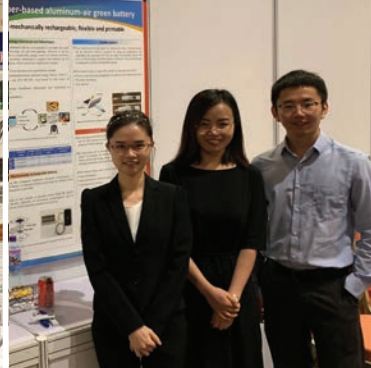
Zhong Shen (left) with guest of honour (second from left) and team members



Zhixi Li



Yage Zhang (left) and Yuhuan Zhou



From left: Yu Ho Kwok, Yingguang Zhang and advisor Dr Yifei Wang

The competition is organised by the Hong Kong New Generation Cultural Association for academic exchanges and innovation and entrepreneurship talents from the tertiary institutions in Hong Kong. Winning teams may represent Hong Kong at the 'Challenge Cup' National University Student Innovation and Entrepreneurship Competition to be held in Beijing later this year.

List of winning projects by HKU RPg students:

Award	Name of Project	Project Team Members
Section: Innovation		
Category: Life Sciences		
Second Prize	Tail domains of myosin-1e regulate phosphatidylinositol signalling and F-actin polymerization at the ventral layer of podosomes	Yage Zhang (PhD student, Department of Mechanical Engineering) Fakun Cao Yuhuan Zhou (PhD students, School of Biomedical Sciences)
Category: Energy, Environmental and Chemical Engineering		
First Prize	Paper-based aluminium-air green battery: Mechanically rechargeable, flexible and printable	Yingguang Zhang Yu Ho Kwok (PhD students, Department of Mechanical Engineering)
Category: Information Technology		
Second Prize	Smart investment portfolio management system based on advanced artificial intelligence and blockchain techniques	Zhixi Li (PhD student, Department of Electrical and Electronic Engineering)
Section: Entrepreneurship		
Category: Start Up		
Second Prize	AI-enabled full-automatic dental prosthesis design	Hao Ding Muzhi Ma Ting Wang (PhD students, Faculty of Dentistry) Shengzhi Qin (PhD student, Department of Computer Science)
Category: Growth Enterprise		
First Prize	AI Academy	Zhong Shen (PhD student, Department of Mechanical Engineering) Wai Hin Wong (BEng(ME) student) Yiu Hang Wong (BEng(EE) graduate) Ka Yan Tai (BA graduate)

Inheritance and Innovation – Entrepreneurship Training Camp

In April 2019, I participated in a 10-day entrepreneurship training camp themed 'Inheritance and Innovation', co-organised by the Bauhinia Valley Innovation and Entrepreneurship Development Center and the Overseas Education College of Shanghai Jiao Tong University. The camp aims to help youth participants to understand current development trends in mainland China, and to foster cooperation in terms of innovation, science and technology between mainland China and Hong Kong. During the course, we had the opportunity to visit and learn from some successful enterprises in mainland China, including Gold Mantis, Paramount and the Shui On Group.

Traditional Chinese medicine is one of our most precious inheritances. More and more researchers have realised the medical value and therapeutic effect of traditional Chinese medicine. My focus of study, acupuncture, is becoming more famous all over the world and accepted by mainstream medicine. However, other areas such as electroacupuncture or other Chinese herbal compounds still face huge challenges in terms of gaining recognition worldwide.



Jie Chen (middle) at the closing ceremony of the entrepreneurship training camp.

I am working hard with my supervisor, Professor Lixing Lao, to become the bridge between Western medicine and Chinese medicine. For instance, I am applying for a patent in mainland China for an acupuncture device for research and clinical practice. I am eager to transfer the knowledge and patent it for commercial usage, and even to establish a startup to contribute to HKU and society. The training camp was an excellent opportunity for me to get more insight into innovation and technology industrialisation as well as routines of entrepreneurship and innovation transfer.

Jie Chen

PhD Candidate

School of Chinese Medicine

Interdisciplinary Research Competition 2019

The Interdisciplinary Research Competition (IRC) – jointly organised by the Graduate School, Graduate House and Postgraduate Student Association – was held for the third time on April 17, 2019. The IRC has been set up to promote interdisciplinarity among postgraduate students.

Eight teams entered the final of the 2019 competition. The judging panel members were Professor Christopher John Webster, Dean of the Faculty of Architecture, Professor Thomas Ng, Associate Dean (Teaching and Learning – TPg) of the Faculty of Engineering, and Dr Wei-Ning Lee, Master of the Graduate House and Associate Professor of the Department of Electrical and Electronic Engineering.

The champion award went to the project 'Breast Cancer Pre-screening: Image-based Circulating-tumour-cell Detection in Blood'. The winning team comprised Chak Man Lee, Maolin Wang, who are PhD candidates in the Department of Electrical and Electronic Engineering, Fung Chung Man, a PhD candidate in the Department of Mechanical Engineering, and Peter Wang Jue, an MPhil candidate in the Department of Surgery.



HKU Three Minute Thesis (3MT®) Competition 2019

Jointly organised by the Graduate School and the Knowledge Exchange Office (KEO), the Three Minute Thesis (3MT®) Competition 2019 of HKU was successfully held on March 7, 2019. Developed by The University of Queensland, Australia in 2008, the 3MT celebrates the discoveries made by research postgraduate (RPg) students and encourages them to develop the skills to communicate the importance of their research to the broader community. This year, 17 RPg students participated in the competition and presented their research within three minutes to a non-specialist general audience.



Mr Andrew Fung Hau Chung (Chief Financial Officer, Henderson Land Development Company Limited), Mrs Teresa Tong (Certified Public Accountant, Retired Partner of Ernst & Young, Former Chairperson of HKU Convocation, and Former HKU Court Member), and Mrs Daisy Tong Yeung Wai Lan (Former Partner & Notary Public Litigation & Insolvency of Deacons), served on the adjudicating panel as our guests of honour of the final competition. Internal members of the adjudicating panel were Professor John Bacon-Shone, Associate Director of the KEO, who served as the Chairman of the panel, Professor Dong-Yan Jin, Associate Dean (Internationalisation and Partnership) of the Graduate School, Professor Maggy Lee of the Department of Sociology and Dr Wing-Yee Lui of the School of Biological Sciences.

Congratulations to all the winners of the HKU 3MT Competition 2019:



Champion

Name: Alfred Amruth (MPhil candidate, Faculty of Science)
Presentation Title: Illuminating dark matter with nature's time machine
Primary Supervisor: Dr Jeremy Jin Leong Lim



1st Runner-up

Name: Oi Kwan Mak (PhD candidate, Faculty of Science)
Presentation Title: Secretin, a water balance in our body!
Primary Supervisor: Professor Billy Kwok Chong Chow



2nd Runner-up

Name: Ching-yin Nathan Kwan (PhD candidate, Faculty of Arts)
Presentation Title: The International Suppression of Chinese Piracy in South China, 1841-1899
Primary Supervisor: Professor John Mark Carroll



People's Choice Award Winner (selected by audience ballot)

Name: Chak Man Lee (PhD candidate, Faculty of Engineering)
Presentation Title: Phase? The new phase for tomorrow cancer diagnosis
Primary Supervisor: Dr Kevin Kin Man Tsia



Online People's Choice Award Winner (the finalist who has the most 'Likes' on YouTube)

Name: Ashini Dias Mahadura (MPhil candidate, Faculty of Science)
Presentation Title: Visualizing evolution: Origin of new species in Hong Kong
Primary Supervisor: Professor Richard Mark Kingsley Saunders

Videos of the presentations of the awardees and finalists are available at <https://www.ke.hku.hk/hku3mt/index.php/competition/2019/2019-videos-of-finalists-and-awardees>.

Books, Buildings and Buddhism –

An Alumni Tale of Dr Zhu Xu

Our opening chapter begins with a small boy growing up in Chongzhou, Sichuan province: a small city with a long history dating back some 2,000 years. From early childhood days, the young Zhu Xu was surrounded by books and, encouraged by his father, he developed a special interest in history. As a schoolboy his favourite reads were the Japanese court novel 'The Tale of Genji', with its beautiful pen and ink drawings, and the influential literary Chinese epic 'Romance of the Three Kingdoms' by Luo Guanzhong, with its compelling storyline and dynamic illustrations – both books captured the imagination of the young reader.

This early love of reading aroused Zhu's curiosity and desire to learn, so it is not surprising that Zhu performed exceptionally well at high school, and was accepted for entry to Zhejiang University.

Turning the page we find that, as with other alumni story heroes, the young Zhu decided to embark upon an academic adventure and so looked to HKU. After completing his Master's in Architectural Design, he started working in Professor Wei Jen Wang's design studio on both modern and renovation building projects. It was a crucial time for Zhu, as his interest in architectural history grew alongside his career as an architect, and in his personal life his beliefs in Buddhism began to develop. This turning point was the start of a new chapter. "Choosing to study the history of Buddhist architecture was a combination of my interest (history), expertise (architecture) and belief (Buddhism)," Dr Xu says.

Professor Wei Jen Wang went on to become his PhD supervisor. Of his very influential mentor Dr Xu says, "He is kind, knowledgeable, and cares about his students. Whenever I had difficulties, I would go to him for help."

Dr Xu surveying in a timber-framed pagoda in north Shanxi under a temperature of -15°C (left) and a Buddhist Temple in Pagan, Myanmar (right).



Dr Xu surveying in the Ajanta Caves in India

Professor Eunice Seng and Professor Tao Zhu are two professors who Dr Xu also highlights as being most helpful both during and after his PhD research, "particularly for their critical thinking of architectural history and historiography".

From his first days at HKU, Dr Xu was impressed by the resources, especially the library. "With its very efficient exchange system and international connections, students can have access to many precious books from [universities] overseas," he comments enthusiastically. "This is why my scholarship here is very different from that of my peers in mainland China."

Now, as an Assistant Professor in the Department of Architecture, Dr Xu has a keen, experienced eye for buildings and design. He highly praises the HKU campus. He comments: "The built environment of HKU is unique, even from universities in the US, Australia or Europe. It is a very efficient and pleasant place to live, study and work. The new Centennial Campus has been carefully elevated to create continuous shaded boulevards and plazas (shade is so important in Hong Kong), and students are willing to work outside. It is incredibly different from other universities. I love it!"

As a member of the Society of Architectural Historians, Dr Xu's work has also taken him to international conferences such as that held in Glasgow, UK 2016 where he presented 'Monastic Cells to Corridors,' an important presentation on how Chinese monasteries in the 6th Century transformed from being solely an enclosure for monks to a more public space. "This had never been observed or given insight in previous studies," he adds.

It would take a whole book to reflect Dr Xu's passion for Buddhist architecture; fortunately that is just what he is doing! His book, currently being published in Hawaii, is entitled 'Shanhua Monastery: Temple Architecture and Esoteric Buddhist Rituals in Medieval China'.

Dr Xu's advice to those embarking upon RPg studies is first to recognise that "Critical thinking is really, really important – never accept a concept or idea without thinking how it was created." His second piece of advice is, "Never narrow down your scope of interest, always be open to new knowledge in other fields as you never know how this may benefit you...in the most unexpected ways."

If the triangle is the strongest structure in architecture, then Dr Xu's life story is built upon very solid foundations: namely his love of books, buildings and Buddhism. With much more to come, Dr Xu's HKU chapter makes for stimulating reading.



Applying Technology for Social Good

To promote the concept of helping people through innovation and technology in the community, Dr Kai Wing Siu – a PhD graduate in the Department of Mechanical Engineering – teamed up with other HKU graduates to establish a technology nonprofit organisation, InnoTech Association, dedicated to the use of technology for helping the disadvantaged and disabled.

The team has designed a mobile app 'WeVoice' that aims to provide vision assistance to the visually impaired, including blind people and those with moderate to severe visual impairment. The mobile app makes use of artificial intelligence to recognise objects and text, and transforms the output into audio form, which allows people with visual impairments to comprehend text and also recognise objects around them. In June 2019, 'WeVoice' received the Merit Award under the Public Sector Distinction Category in the Asia Smart App Awards organised by The Hong Kong Wireless Technology Industry Association.

In future, the team is going to organise STEM courses/activities targeted at children from underprivileged families. Development of another mobile app is also underway, with the objective of connecting visually impaired users with InnoTech's volunteers to enable immediate assistance.



4th HKSTP Internship and Career Expo @ HKU



Welcoming remark by Professor Christopher Chao, Dean of Engineering

The Graduate School, Graduate House and the Centre of Development and Resources for Students (CEDARS) of HKU and the Hong Kong Science and Technology Parks Corporation (HKSTP) co-organised the 4th HKSTP Internship and Career Expo @ HKU in Loke Yew Hall on March 21, 2019. Professor Christopher Chao, Dean of Engineering, gave a welcoming remark and Mr Wesley Wong, Senior Manager (Partnership Programmes) of HKSTP, delivered a presentation on the development of HKSTP and the opportunities for growing talents in the Science Park.

Over 40 companies participated in the Expo and offered over 200 internships and job openings for our students to explore internship and career opportunities in the innovation and technology industry at HKSTP. Students aspiring to develop a career in the innovation and technology industry had a chance to meet with prospective employers and to network with professionals in their field.



Exhibition in Loke Yew Hall

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The Graduate School,
P403, Graduate House,
The University of Hong Kong,
Pokfulam Road, Hong Kong.



EDITORIAL TEAM

Professor Frederick K.S. Leung (*Dean, Graduate School*)
Miss Stephanie Leung (*Graduate School*)
Ms Vicki Geall (*Technical Writer, Research Services*)

Tel: 2857-3470 Fax: 2857-3543
E-mail: gradsch@hku.hk Uri: <http://www.gradsch.hku.hk>