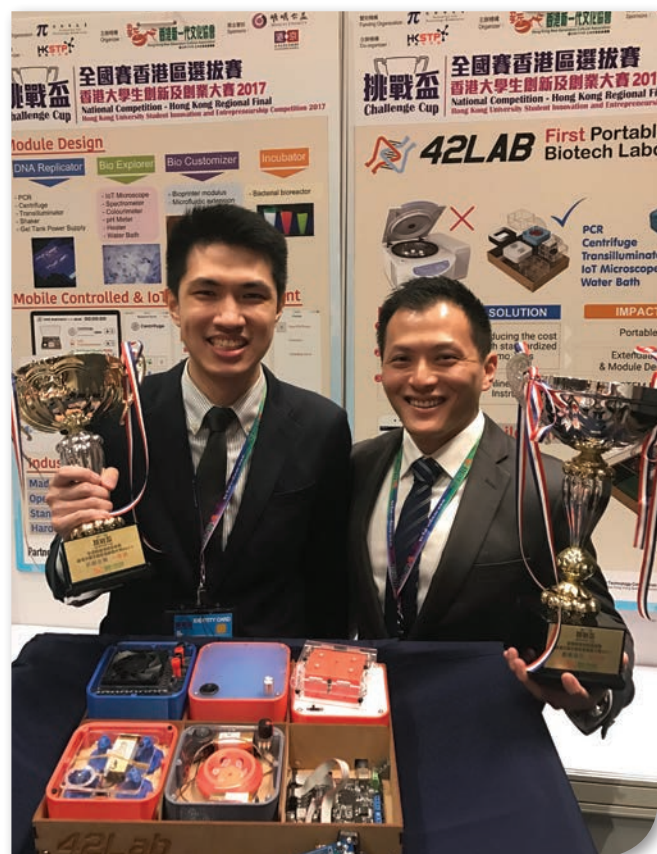


PhD Students Win Top Prizes at Challenge Cup National Competition Hong Kong Regional Final

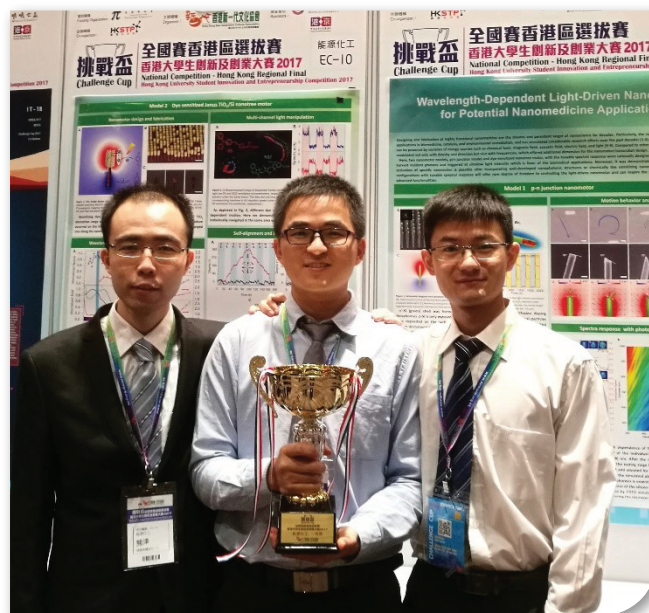
Research postgraduate students from HKU swept the top awards in the 'Challenge Cup' National Competition Hong Kong Regional Final – Hong Kong University Student Innovation and Entrepreneurship Competition 2017. These include the Grand Award and First and Third Place Awards in the 'Entrepreneurship' category, and First and Second Place Awards under the 'Innovation' category. HKU also received the Outstanding Participating Award.

Wang Jizhuang, Zheng Jing, Xiong Ze and Dai Baohu, PhD candidates in the Department of Chemistry, won the First Place Award under the Innovation – Energy and Chemical Engineering Category. Their nanomotor configured with tunable spectral response incorporated

techniques in nanophotonics and dye-sensitised solar cells. Their nanomotor operates even at ultralow light intensity and will be useful for biomedical applications and in design of future nanomotors with advanced functionalities.



Dr Ng Cheuk Kwong (left) and So Hon Fai



From left: Xiong Ze, Zheng Jing and Wang Jizhuang

42Lab, a portable hardware platform for biotechnology experiments developed by PhD graduate Dr Ng Cheuk Kwong (Department of Physics) and PhD student So Hon Fai (School of Biomedical Sciences), captured the Grand Award in Entrepreneurship as well as the First Place Award in the Start Up Sub-Category. Just the size of a suitcase, their all-in-one modular system provides functions equivalent to a conventional laboratory set-up inclusive of a centrifuge, polymerase chain reaction (PCR) machine, transilluminator and more. Their novel modular design also allows users to combine various measurements for different experiments. Through this platform, the duo envisions making biotechnology accessible to the general public, e.g. in STEM education at secondary schools.

List of winning projects by RPg students:

| Award | Name of Project | Project Team Members |
|-----------------------------|--|---|
| Category: Innovation | | |
| First Place | Wavelength-dependent light-driven nanomotor for potential nanomedicine application | WANG Jizhuang ZHENG Jing XIONG Ze DAI Baohu (<i>PhD candidates, Department of Chemistry</i>) |
| Second Place | Monitoring the fitness of antiviral-resistant influenza strains during an epidemic | LEUNG Sze Man (<i>PhD candidate, School of Public Health</i>) |
| Category: Entrepreneurship | | |
| Grand Award and First Place | 42Lab-A portable hardware platform of biotech experiments in STEM education | NG Cheuk Kwong (<i>PhD graduate, Department of Physics</i>) SO Hon Fai (<i>PhD candidate, School of Biomedical Sciences</i>) |
| Third Place | Advanced formulation technologies- A carrier system for active ingredients | LIU Zhou (<i>PhD graduate, Department of Mechanical Engineering</i>) |
| Third Place | Project Raphael | NG Cheuk Kwong (<i>PhD graduate, Department of Physics</i>) |

The competition was organised by the Hong Kong New Generation Cultural Association. Winning teams get to represent Hong Kong at the 'Challenge Cup' National University Student Innovation and Entrepreneurship Competition, which is the 'Olympics' of science and technology for college students in China.

Professor Anthony Yeh, Chair Professor of the Department of Urban Planning and Design and one of the judges of the Innovation Category in the competition since 2015, said that "RPg students should be encouraged to participate in the competition to test how good their ideas are and to find out what other research students are doing. This can give them new ideas for their further research and they can also learn how to present and sell their ideas." The keys to success in the competition, according to Professor Yeh, include

- Scientific principles: Reasonable, accurate and relevant scientific theories and research methods
- Practicality: Social impact, practical value and range of the research

- Rigorousness: Support of adequate data and scientific articles, and the process of research
- Skills: Ability to process data and use instruments; participation in the whole project
- Presentation: Precise and concise delivery of ideas with good graphics and models to explain their ideas to the judges and visitors

Last October, Professor Yeh was invited to share his views on the Challenge Cup National Competition at the Workshop on Innovation and Entrepreneurship organised by the Graduate School. The Graduate School encourages RPg students to participate in various innovation-related competitions/programmes, such as the

- 2017 International Invention Innovation Competition in Canada
- FINTECH HACKATHON Applications of Machine Learning in Banking
- 2017 Mainland Expedition on Entrepreneurship and Technology
- DreamCatchers Medtech Hackathon
- 3rd China College Students' "Internet Plus" Innovation and Entrepreneurship Competition
- Cyberport University Partnership Programme
- Global Youth Entrepreneurs Forum 2017
- CIC Construction Innovation Award 2017

The recent success of HKU entrants in the Challenge Cup Competition Hong Kong Regional Final 2017 is very encouraging, and the Graduate School will continue to further strengthen its efforts in promoting innovation and entrepreneurship amongst research postgraduate students.



Building a Culture of Research across Disciplines

Interdisciplinarity is one '1' of the University's (3 +1) I's strategy, along with internationalisation and innovation, converging to create impact. Research around the world is increasingly focussed on bringing together ideas and fields that were once distinct entities, with the aim of creating new knowledge and impact. The following initiatives illustrate the Graduate School's efforts to encourage RPg students to pursue research outside of their primary field.

Interdisciplinary Research Competition

The Graduate School, Graduate House and Postgraduate Student Association joined hands to launch the first **Interdisciplinary Research Competition** to promote interdisciplinarity among postgraduate students. Ten teams reached the final of the competition held on April 10, 2017. The judging panel members included Professor Norman Tien, Dean of Engineering, Professor Lena Wong, Associate Dean (Research Higher Degrees) of the Faculty of Education, and Professor Vivian Yam, Philip Wong Wilson Wong Professor in Chemistry and Energy and Chair Professor in the Department of Chemistry.

First place was awarded to the project titled 'Artificial Intelligence for Rehabilitation, Retrofit and Renovation Design of Buildings (AIR3DB)'. The winning team comprised four PhD candidates: Pan Mi (Department of Civil Engineering), Zhang Sujuan (Department of Real Estate and Construction), Meng Nan (Department of Electrical and Electronic Engineering) and Zhang Yang (Department of Electrical and Electronic Engineering).

Trans-disciplinary Challenge Award 2017

In March 2017, the Graduate School held two trans-disciplinary research

workshops: **Big Data Applications** and **Complex Social Networks**, delivered by Dr Reynold Cheng (Department of Computer Science) and Professor Liaquat Hossain (Division of Information and Technology Studies, Faculty of Education) respectively. After completing the workshops, the participating students summarised their collaborative research ideas in posters and competed for the **Trans-disciplinary Challenge Award 2017** on May 12, 2017. The poster entries were also showcased at the Postgraduate Hub from May 11 to 13, 2017.

The competition was chaired by Professor Sam-Po Law, Associate Dean (Courses and Professional Development) of the Graduate School and the judging panel included Professor John Bacon-Shone (Associate Director, Knowledge Exchange Office) and Professor Hongzhe Sun (Professor, Department of Chemistry).

The Trans-disciplinary Challenge Award 2017 went to the project 'Less Takeout, More Sustainable', with team members Chen Jieyi (MPhil candidate, Faculty of Dentistry), Chen Kang (PhD candidate, Department of Geography), Chen Shouqiang (PhD candidate, Department of Urban Planning and Design) and Hou Xiangyu (PhD candidate, Department of Electrical and Electronic Engineering).

Finalists and judges of the Interdisciplinary Research Competition



Swire Scholarships for Research Students in Residence at Robert Black College

The Swire Scholarships were established, through the generous donation by the Swire Group, to provide a learning opportunity for young members of the University's academic community to reside in the Robert Black College, and thereby mix with international scholars. Swire Scholars have free accommodation with breakfast at the College. They are expected to actively interact with the visiting academics residing in the College, so as to enrich their learning experiences and also offer the visiting academics good company.

All full-time research students who are registered for an MPhil or a PhD degree at the University are eligible to apply for the Swire Scholarships. The selection process for the 2016-17 Swire Scholarships concluded recently, and the awardees are:

HKU Three Minute Thesis (3MT®) Competition 2017

Jointly organised by the Graduate School and the Knowledge Exchange Office, the Three Minute Thesis (3MT®) Competition 2017 of HKU was held successfully on March 6, 2017. The competition attracted 31 research postgraduate (RPG) student entrants, who gave dynamic and engaging talks about the significance of their research in just three minutes.

Professor Peter Mathieson, President and Vice-Chancellor of HKU, the officiating guest of the final of the competition, stressed the importance of making research or innovation accessible beyond academic publications to have a real impact on society. Mr Francis Tin-fan Yuen, Chairman of the Advisory Board of Ortus Capital Management Ltd, and Mr Edward Kwong Fai Chow, Founder and Chairman of China Infrastructure Group and HKU Council member, served on the adjudicating panel as external members. Internal members of the adjudicating panel included Professor John Bacon-Shone (Chairman of the panel), Associate Director of the Knowledge Exchange Office (KEO), Professor John Kao, Vice-President and Pro-Vice-Chancellor (Global), Dr Roger Chan of the Department of Urban Planning and Design, Professor Paul Cheung of the Department of Electrical and Electronic Engineering, Professor Adam Jaworski of the School of English and Professor Ben Young, Associate Dean of the Graduate School.

Congratulations go to all of the following winners:



Champion and Online People's Choice Award

(the finalist who has the most 'Likes' on YouTube)

Name: Ming Yan CHAN, Brian
(MPhil candidate, Faculty of Science)

Presentation Title: Peering Through Space and Time with Nature's Cosmic Telescope

Primary Supervisor: Dr Jeremy Jin Leong LIM



1st Runner-up and People's Choice Award

(selected by audience ballot)

Name: Shrestha GHOSH
(PhD candidate, Li Ka Shing Faculty of Medicine)

Presentation Title: Live Life...Queen Size...

Primary Supervisor: Professor Zhongjun ZHOU



2nd Runner-up

Name: Sze Yi MAK, Sibyl
(PhD candidate, Faculty of Engineering)

Presentation Title: Control of Water-Based Fluid in Microfluidics

Primary Supervisor: Dr Anderson SHUM

Videos of the presentations of the awardees and finalists are available at <http://www.ke.hku.hk/hku3mt/index.php/competition/2017/2017-videos-of-finalists-and-awardees>.



CYBULSKI
Jonathan David
PhD candidate, School of Biological Sciences



LEUNG Ka Man
PhD candidate, Department of Real Estate and Construction



SONIA
PhD candidate, Faculty of Dentistry



GUO Yanan
MPhil candidate, Department of Sociology



POON Koon Lam
PhD candidate, Department of Chemistry



XIE Sha
PhD candidate, Faculty of Education

Congratulations to the six recipients.

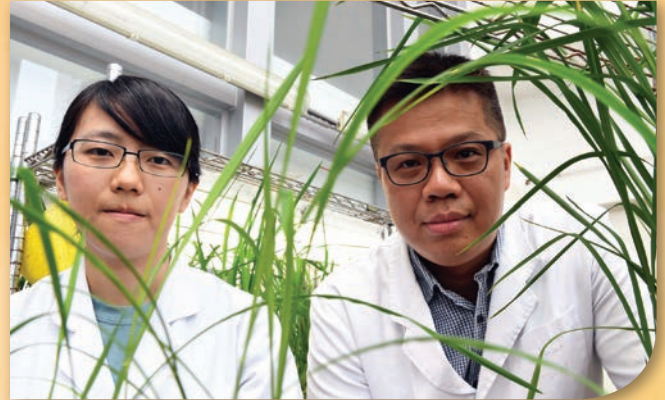
Flourishing Passion for Plant Science Research

Inspired and determined to study biotechnology, Lydia Lam Pui Ying received her Bachelor of Science in Biotechnology from HKU in 2012. She was then awarded the highly competitive Hong Kong PhD Fellowship for her PhD studies at HKU. During her doctoral studies, Lydia has been involved in a collaborative research project with Kyoto University (Kyoto U) with her supervisor Dr Clive Lo Sze-chung. This research revealed a new strategy to allow cellulose in rice straw to release its fermentable sugar more efficiently, a breakthrough that was recently published in a notable plant science journal, 'Plant Physiology'. Lydia has been awarded the JSPS Postdoctoral Fellowship for Research in Japan by the Japan Society for the Promotion of Science and will start her postdoctoral research at Kyoto U this September.

The reason I chose to study my PhD at HKU was very simple. I had a wonderful time during my bachelor degree at HKU and love it here so much that I wanted to stay as long as I could. My PhD study has been fruitful and enjoyable but, as expected, also tough. I was working on a challenging project and came across failures from time to time. But with the support of my supervisor and the University, I finally finished it and published some good papers.

I was very lucky to be awarded the Hong Kong PhD Fellowship and it has definitely helped me to gain valuable research experience. With this financial support, I was able to attend the biggest plant conference in the USA, where many great researchers gave inspiring seminars. In the past, I thought they would only be accessible to me in the papers I read. With the help of the fellowship, I had the opportunity to go to Kyoto University for an 8-month exchange study. I was deeply impressed by the ways the students there work: they plan everything very well, work with extreme precision and aim at doing everything beyond perfection. After this 'culture shock' in Japan, I always strive for my work to be prompt yet perfect.

To me, HKU is a place full of opportunities and freedom, where you can choose what you want to do. I am not the kind of person who likes to stay in the lab all day, so I am glad that HKU has many extra-curricular activities that welcome postgraduates. For example, I was a member of the University football team and represented HKU at inter-university competitions and even travelled abroad to play, for instance against



With supervisor Dr Clive Lo

Fudan University. I also like the courses organised by the General Education Unit, in which you could learn something interesting and have fun. I attended a non-credit bearing Japanese course at HKU, and what I learnt was very useful during my exchange study in Japan.

I believe all the experiences I had during my PhD study at HKU have helped me to be a better researcher and a better person. They also helped build up my passion for research and I now want to continue to work on plant science for the rest of my life.

Lydia Lam Pui Ying

PhD candidate, School of Biological Sciences

More details on the research are available at http://www.hku.hk/press/news_detail_16285.html



Partnership of Learning and Teaching in RPg education

During the second semester of the 2016-17 academic year, a new initiative was launched by the Graduate School to integrate a *partnership model of learning and teaching in our research postgraduate (RPg) training*. RPg students were invited to offer workshops to other RPgs, through which they had the chance to design, develop, conduct and evaluate their workshops. The following two workshops were conducted in June and July, and both 'student teachers' reported finding the experience very rewarding:

Workshop 1:

Dealing with Big Data in the Humanities

"It was my first time teaching statistical methods and it is very different from the kinds of things I usually teach. It has made me realise how much I've learned myself over the last two years. I felt that the students were really motivated and asked good questions; I think most of them learned something new. I'm very grateful that I had the chance to teach this workshop and I would definitely do it again!"

Eileen Waegemaekers

PhD candidate, School of Humanities (Linguistics)

Workshop 2:

Reproducible Research: Automate Your Science

"I think all participants were really motivated to learn. This was really great. I think the exercises I provided were challenging to some people but achievable. This was good since it created a nice atmosphere of collaboration among participants. Further, I could see 'success experiences' on people's faces. I think it was a nice experience."

Robert Porsch

PhD candidate, Department of Psychiatry

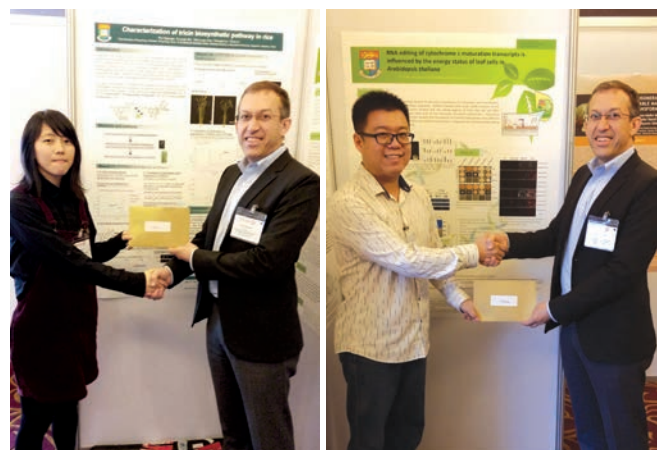
If you are also interested in gaining some teaching experience during your postgraduate education, look out for the next call for this partnership initiative in the first semester of the new academic year.

PhD Students Win Poster Awards at Asia Congress in Plant Science

Lydia Lam Pui Ying and Sun Yuzhe, two PhD candidates from HKU's School of Biological Sciences, have won both of the prizes designated for student posters at the 4th Plant Genomics and Gene Editing Asia Congress 2017, held in Hong Kong in April 2017.

Lydia's project, 'Characterisation of tricetin biosynthetic pathway in rice', is about identifying and characterising the key structural enzymes in tricetin biosynthesis pathway in rice by utilising gene editing technologies. Tricetin is a unique flavonoid that is widespread in grasses and other plants. More importantly, the biosynthesis pathway being studied is the first natural lignin monomer outside the monolignol pathways. Lydia's work represents the first and the only work to date that has characterised this novel pathway in plants.

In his research 'RNA editing of cytochrome c maturation transcripts is influenced by the energy status of leaf cells



in *Arabidopsis thaliana*', Yuzhe studied RNA (ribonucleic acid) editing events in two major plant organelles – mitochondrion and chloroplast – by using high-throughput sequencing technology. The research found that AtPAP2, a phosphatase located on the outer membranes of chloroplasts and mitochondria, can interact with MORF protein, a component of the protein complex that mediates RNA editing. RNA editing events are also found to be clustered in cytochrome c maturation genes. The findings suggest that RNA editing could offer an alternative regulatory mechanism to organelle physiology.

Triple Alumnus in a Special Niche – Alumni Interview with Dr Tommy Tse Ho Lun



Academics find their true calling by diverse routes. But few have had such a colourful background as Dr Tommy Tse, Assistant Professor in the Department of Sociology.



Armed with his first degree from HKU in comparative literature, he started his career in the advertising industry, copywriting for various global fashion, luxury and pharmaceutical brands for over six years.

This has given him unique insight into his favourite areas of research – the interdisciplinary study of fashion communication, and the media and cultural industries in Asia. From the social scientific perspective, he says, it is essential to actually meet these people, not just study them in theory, and ask how their problems relate to our ever-changing society.



Dr Tse (black and white top) with students from the Master of Social Sciences (Media, Culture and Creative Cities) Programme

A relatively rare triple alumnus, Dr Tse holds three degrees from HKU. After completing his MPhil, he had several overseas options for his PhD, but he decided to stay in familiar surroundings. “There’s nothing inferior about HKU,” he says. “It gave me very good experience and it enabled me to keep my job while completing my PhD.”

people use their talent? What about work conditions? Does the work satisfy their intellectual and spiritual needs?” While Dr Tse is passionate about his research, he also loves teaching. “I enjoy interacting with students – they all want to join advertising, the media or public relations. I try to help them plan for a career in what they perceive as a glamorous industry.”

“One of my favourite areas of research is creative and cultural labour. How do these

Before taking up his HKU appointment three years ago, Dr Tse taught at the School of Communication at Hong Kong Baptist University, the Department of Fashion and Image Design at the Hong Kong Design Institute, Central Saint Martins of the University of Arts London, and the Culture and Media Domain at HKU SPACE Community College. He currently teaches a wide range of topics while pursuing his own research in his major areas of study – celebrity, the cultural industries and youth culture – alongside writing, speaking and making documentaries.

Dr Tse says he has mixed views on today’s almost universal devotion to electronic social media. “Personal relationships have changed, and people even talk to other family members by WhatsApp. There are negative aspects like privacy issues and the risk of putting too much personal data online, whether dealing with banks or with Facebook. But it’s not all negative: the rise of technology enables people to break through traditional barriers, it empowers them and it helps the underprivileged to find a voice. It also makes it easier to avoid being cheated as prices can be easily checked online.”

Dr Tse says he uses all sorts of sites as he needs to keep up with what is happening. He also finds social media a good platform for interacting with students. “But I don’t spend all my time on Facebook and Instagram,” he says. Occasionally he gives himself a digital detox, switching off everything and reading a novel. Unlike most of his contemporaries, he says he still buys a lot of books, CDs and hard copies of magazines. “I’m in my 30s and my friends tease me about such old-fashioned practices. But the quality is much better and I love to touch and feel real paper than to play with gadgets.”

Dialogue with Dov Moran – The Inventor of USB Memory Stick

Over 50 HKU members – including research postgraduate students, teaching staff and alumni – met Mr Dov Moran, an Israeli entrepreneur and investor who is best known as the inventor of the USB memory stick, at the Postgraduate Hub, Graduate House on June 14, 2017 for an informal and interactive discussion. The Dialogue with Dov Moran was jointly organised by the Graduate School and the Technology Transfer Office. Professor Peter Mathieson, President and Vice-Chancellor of HKU, presented Mr Moran with a wooden USB with the Chinese motto of HKU, and in return received a gift from Mr Moran, his first book *100 Doors*. In his presentation, Mr Moran shared his experience in innovation and entrepreneurship. Audience members were very interested in the topic and actively involved in the Q&A session.



Dialogues with Croucher Innovation Awardees

Four of HKU's Croucher Innovation Awardees have very generously participated in sharing sessions with RPg students. Through these exchanges, the awardees shared their experience of and insights into innovative research, which also echoes part of HKU's (3+1) 'I's' strategy – internationalisation, innovation and interdisciplinarity, which converge to create collective impact. The dialogues were with the following four academics:

Dr Ho Yu AU-YEUNG
Assistant Professor, Department of Chemistry

Dr Hayden Kwok-Hay SO
Associate Professor (Teaching), Department of Electrical and Electronic Engineering

Dr Carmen Chak Lui WONG
Assistant Professor, Department of Pathology

Professor Wang YAO
Professor, Department of Physics

2nd HKSTP Internship and Career Expo @ HKU

The 2nd HKSTP Internship and Career Expo @ HKU – co-organised by 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) – was held in Loke Yew Hall on April 7, 2017.

Professor Mee Len Chye, Dean of the Graduate School, welcomed participants to the Expo, and Mr George Tee, Chief Technology Officer of HKSTP, gave a presentation on the development of HKSTP and the opportunities for growing talents in the Science Park. Dr Miles Wen, an HKU PhD graduate and a startup founder in the Science Park, was invited to share his insights on the road to entrepreneurship.

The Expo comprised 40 exhibitors, offering over 320 internships and job openings, and attracted over 300 students. 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.



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