



School of Energy and Environment

Newsletter

April 2018 Issue



香港城市大學
City University of Hong Kong
專業 創新 胸懷全球
Professional-Creative
For The World

能源及環境學院
SCHOOL OF ENERGY
AND ENVIRONMENT

Dean's Message

Dear Readers,

Welcome to our latest newsletter, the April issue! In this issue, we are glad to share with you the development of the School of Energy and Environment (SEE) in a range of aspects including our faculty members, research niches, academic development, student activities and industrial networks.



At the start of this year, we are pleased to have Dr. Shauhrat Chopra joining our team. Shauhrat's research interest is in sustainable production and resilient infrastructure. Before joining SEE, Shauhrat worked as a Postdoctoral Researcher at the Institute for Environmental Science and Policy, University of Illinois at Chicago. While we are having new blood to the team, it is unquestionably with mix feelings to farewell Dr. Wey Yang Teoh. Wey Yang has been contributing to teaching, research and outreach initiatives of SEE. We wish him every success in his future endeavours.

SEE aspires to be a leading School in the Asia-Pacific region specializing in cutting-edge research in energy and environment. We are also devoted to nurturing young professionals who will provide the industry with innovative solutions to challenges related to energy, environment and sustainability. To enhance our students' employability, abundant student exchange and internship opportunities have been made accessible for our students. You will see some of our students sharing with us their stories in this issue.

Thank you very much for your continued support and advice, which are essential to our success now and in future. If you have any suggestions, please let us know.

Enjoy reading!

Best,
Chak
Professor Chak K. Chan
Dean of School of Energy and Environment
City University of Hong Kong

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New Faculty

Dr. Shauhrat Chopra, Assistant Professor



I broadly have two areas of interest, namely, engineering sustainable built environment, and building resilient engineered systems. Before,

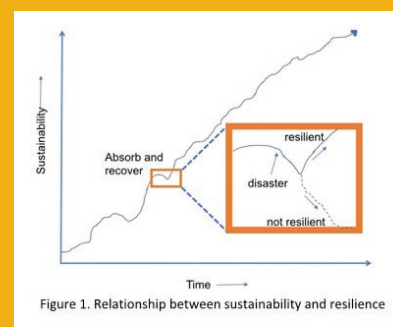
I get into the specifics of what my research entails, it is important to distinguish the two concepts, sustainability and resilience, for the readers. While sustainability is understood in the longer timescale with the objective to create desirable conditions for future generations, resilience applies in the immediate

temporal scale as an adaptive capacity to potential shocks that may derail our progress towards sustainability (Figure 1). Rather than designing for these two objectives separately, my research at SEE will focus on integrating sustainability and resilience to manage the trade-offs between them.

Towards this goal, I am exploring sustainability of different future transformative technologies (like engineered nanomaterials, blockchain technology, among others) through prospective life cycle assessment and identifying ways to deploy them to build resilience of large-scale urban infrastructure by taking a social-ecological systems approach. The aim is not to

compete between a resilient design and a sustainable design, but to engineer resilient systems with sustainable components.

I look forward to collaborating with my colleagues at SEE and together leading environmental efforts in the region.

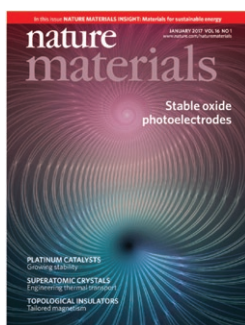


SEE Research Development

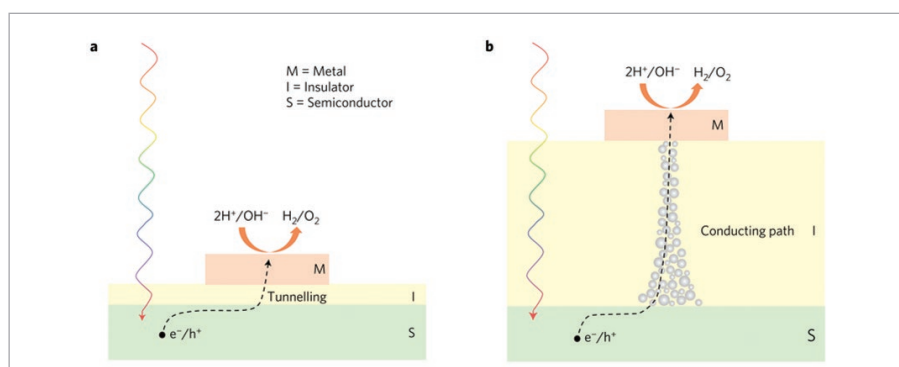
Dr. Sam Hsu's research to decouple the two roles of the insulator published on front cover of Nature Materials

Dr. Sam Hsu has developed a general method for resolving the trade-off between efficiency and stability of metal-insulator-semiconductor photoelectrodes

by employing dielectric breakdown for solar fuel application. This work has been featured on the front cover of the January 2017 Volume 16 No 1 issue of **Nature Materials**.



Dr. Hsu collaborated with researchers in Microelectronic Research Centre, Department of Electrical and Computer Engineering, The University of Texas at Austin, launching the metal-insulator-semiconductor architecture utilizing the breakdown process. This idea solves the instability problem in silicon-based



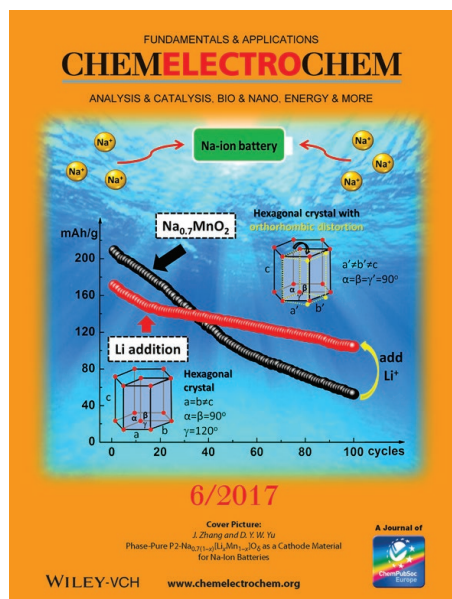
material without reducing the solar to energy conversion efficiency. Localized electrically conducting filament that was firstly created in metal-insulator-semiconductor photoelectrodes by Dr. Hsu, allows photogenerated carriers in the semiconductor to flow easily to the metal catalyst layer.

Based on previous study from other scientists, the construction method in the insulator layer results in low efficiency and unsatisfactory stability. According to the Dr. Hsu's discovery, the charge carrier could go through the insulated layer no matter how thick it is, therefore this finding provides an alternative pathway that allows unstable semiconductor

to generate clean fuels effectively via solar water splitting. The study concluded the conducting filament acts as a "highway" for electron to pass through the insulator and reach to the conducting layer, so that the silicon-based semiconductor has no direct contact with the electrolyte to avoid decomposition under the photoelectrogenerated redox reaction.

This promising idea could be applied generally to the solar-fuel device as the strong method for converting water to storable clean fuels, helping to reduce the use of fossil fuel and providing a blueprint for the related fields.

Dr. Denis Yu's research work on Na-ion batteries highlighted on the inside back cover of ChemElectroChem



Na-ion battery (NIB) is an attractive alternative to Lithium-ion battery for large-scale storage because Na is abundant and inexpensive. However, poor capacity retention with cycling of NIB is still a bottleneck for applications. One of the main issues is the structural stability of the metal oxide cathode materials. In the latest work by Dr. Denis Yu and his group, they discovered that by incorporating Li into Na_{0.7}MnO₂, the distortion within the material structure can be eliminated, thus improving its long-term cycle performance. The work was highlighted as the back cover of **ChemElectroChem** on issue 6 in 2017.

Prof. Michael Leung's project received over HK\$20M funding support

A research project conducted by the SEE has received funding worth HK\$21 million from the Innovation and Technology Fund under the Innovation and Technology Commission and Techskill (Asia) Limited (Techskill) for developing novel technology that converts the waste heat from air-conditioning systems into useful electricity.

This breakthrough technology anticipates saving 70% of the electricity consumed by air-conditioners. Air-conditioning is the largest energy consumer in urban areas, according to the project's lead investigator, Prof. Michael Leung, Associate Dean of SEE. Although air-conditioning units cool indoor air, they reject tremendous heat, which impacts the surrounding environment. The aim of this two-year project is to develop ways to recover thermal energy and convert it efficiently into electricity. The electricity can then be used by the air-conditioning unit itself, for lighting or for other home appliances. This process will improve energy efficiency and resolve thermal discomfort issues.

"Existing Organic Rankine Cycle (ORC) technology can already convert heat into electricity but it works only with heat at high temperatures of 200°C or above, and cannot be applied to the heat rejected by air-conditioning systems commonly at low temperatures of between 60 to 80°C." said Prof. Leung.

By reforming the air-conditioning systems and ORC, and integrating thermoscience



and nanotechnology, the electric power generated from low-temperature heat can significantly raise the Coefficient of Performance (COP) of the air-conditioning systems from an average value of 3 to 10, which means much higher energy efficiency and lower energy consumption, which also means economic benefits.

"The research involves a number of key technologies to be developed by CityU. For instance, advanced nanotechnology changing the metal surface properties of the heat exchangers can improve the heat transfer efficiency, increase the temperature of the thermal energy, resulting in higher heat-to-electricity conversion efficiency. In addition, a single thermodynamic cycle is designed for hot water production and electricity conversion concurrently to enhance the overall system performance." Prof. Leung said.

In previous research, Prof. Leung has successfully used the waste heat from air-conditioning systems to generate hot water in hospitals and hotels by another technology integrated with a heat pump, but the demand for hot water is relatively low, and extra heat still has to be discharged. The recent project will tackle it by recovering the thermal energy and convert it into electricity.

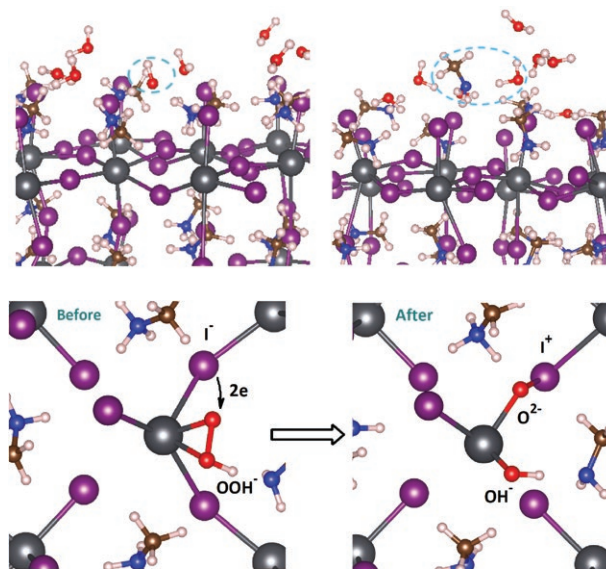


Dr. Patrick Sit's project about unravelling the mystery of the stability issues of a novel class of solar cells

In the past few years, a novel class of solar cells called perovskite solar cells has emerged as the promising next-generation solar cell systems to replace the commercial silicon-based solar panels. Among the many advantages of perovskite solar cells are their superb photovoltaic performance, simple fabrication procedures and the low cost of raw materials. Despite this promising potential, one main problem faced by the current perovskite solar cell systems is their poor stability and the rapid loss of the photo-activity under normal working conditions. This severely affects its potential for wide-spread commercial application.

Using atomic-scale quantum mechanical simulations, the research team led by Dr. Patrick Sit carried out a series of studies to provide comprehensive

understanding of the stability problem of the photo-active perovskite materials, and reveal the microscopic details of the complex decomposition processes. By simulating the perovskite material under different conditions, Dr. Sit's team discovered that the material is stable in the presence of oxygen and water vapor in the humid air. However, under illumination, the photo-generated charge carriers in the perovskite were found to quickly convert the nearby oxygen and water molecules into reactive radicals. These radicals in turn react readily with the perovskite materials leading to its rapid decomposition and loss of photo-activity. These studies resolved the controversial questions of the perovskite degradation mechanisms and the reactive species involved in



the processes. Such understanding is crucial for deriving effective strategies to enhance the stability of this promising class of solar cell systems.

The research was reported in a series of papers published in the *Journal of Materials Chemistry A*, the *Journal of Physical Chemistry C* and *RSC Advances*.

Opinion Column

Electric vehicles – the way to go in Hong Kong?

Dr. Denis Yu, Assistant Professor



Hong Kong was electrified by its largest car racing event ever towards the end of year 2017 – Formula E, which showcased 10 teams in the year's first race of the third season. Spectators were greeted by 20 electric Formula E cars speeding through narrow streets in the Central Harbourfront. Added to the excitement is that the racing cars have barely enough electricity to last for half of the race, so drivers have to literally jump out of their cars and hop into another one in the middle of the race, and strategise on how to use the remaining energy to ensure they can complete the race. Another

appeal of Formula E is the extremely fast acceleration of the car. This is because electric motors are designed to start spinning when a current is applied, unlike a combustion engine. Formula E cars in particular are much more demanding compared to EV for private use because of the big changes in speed along the track. It is a true test on the performance of the battery as well as the vehicle, and there are uncharted areas that will be important for future development of EVs.

Much applause should be given to the Hong Kong government for sponsoring the event, which has special meaning in terms of promoting clean transportation to combat environmental pollution. Electric vehicle is a growing trend in Hong Kong. Back in 2010, there were nearly no pure electric vehicles on the street of Hong Kong. Now, after 6 years, there are up to 6000 that are roaming the streets. The figure will surely go up with time, as Hong Kong, because of its size, is ideal for electric vehicles. Distance between the eastern and western-most points of Hong Kong Island is barely 10 km, and most drivers do not drive more than 50 km a day.

Tesla, in particular, has been dominating the EV market in Hong Kong. You may wonder why? It is true that their key technology is in turning high-quality mass-produced lithium-ion batteries that are used in laptops into battery packs for EV. But one of winning strategies is that they dare to do what most car manufacturers do not dare – to make large and expensive batteries. The common perception by EV makers is that they should make EVs with smaller batteries to remain economically competitive with combustion engines because of the high price of lithium-ion battery. Though, the downside of a smaller battery is that the driving range is reduced. Most common EVs have driving ranges of around 150 km, which is technical sufficient for urban drive. Though, when the limit is low, drivers' start to feel anxious even when there is still 50% energy left. Tesla does not care about these and goes for batteries that can last for example up to 400 km. So there is no need to charge the car every day. Branding is also an extremely important factor. If you are going to pay for a high-cost EV, you want one that looks luxurious. Tesla is excellent in this respect.

Promoting EVs in Hong Kong is not without issues. Hong Kong previously had a test run to use EV as eTaxi, but that programme was cut short after about two years' operation. There need to be sufficient infrastructure to support the EVs. Charging is an important issue, as most drivers in Hong Kong do not have their own private garage. Many public car parks have installed charging stations, but so far, the rate of increase of charging stations has not keep pace with the increase in numbers of EVs. Hong Kong also has many older residential buildings that were designed with transformers based on electricity consumption patterns many years ago. They may or may not have large enough power to support EV charging. Fortunately, there are companies that are provide one-stop shopping to EV users to cut through the red tapes and help them install charging facilities at desired locations, and this is a big step forward.

EVs are great because they have zero emission during operation, and can significantly reduce road-side pollution. Though, the electricity that is used to run EVs has to come from somewhere. In Hong Kong, it is mainly from burning of fossil fuel. So there also needs to be parallel development in renewable energies in Hong Kong to make EV truly environmental friendly.

Is Sharing Economy an opportunity for developing renewable energy in Hong Kong?



Student: Chang Man Hei, Jeffrey (Cohort 2015, BEng in ESE)
Advisor: Dr. Lin Zhang, Assistant Professor

You might not have heard of the term "sharing economy", but you have probably been a part of it. In a sharing economy, goods and services are exchanged through peer-to-peer

interaction. Companies like Uber, Car2Go, Airbnb, and gobee.bike are all part of the sharing economy, and are great examples of how it's changing the way we live.

Services have been changed from being a one-way transaction to being two-way, or multiway interactions between a supplier and their user. We've seen this within the transport and tourism industries. How long will it be until we see the sharing economy impact our energy and environmental industries?

In Hong Kong, less than two per cent of the energy sources used to generate electricity in 2012 was made up of renewable energy. Natural gas made up 22 per cent, and coal made up 53 per cent. If more renewable energy sources were used, we could combat climate change and air pollution. The development of renewable energy in the city, however, lags behind other countries due to the lack of space to build renewable energy facilities.

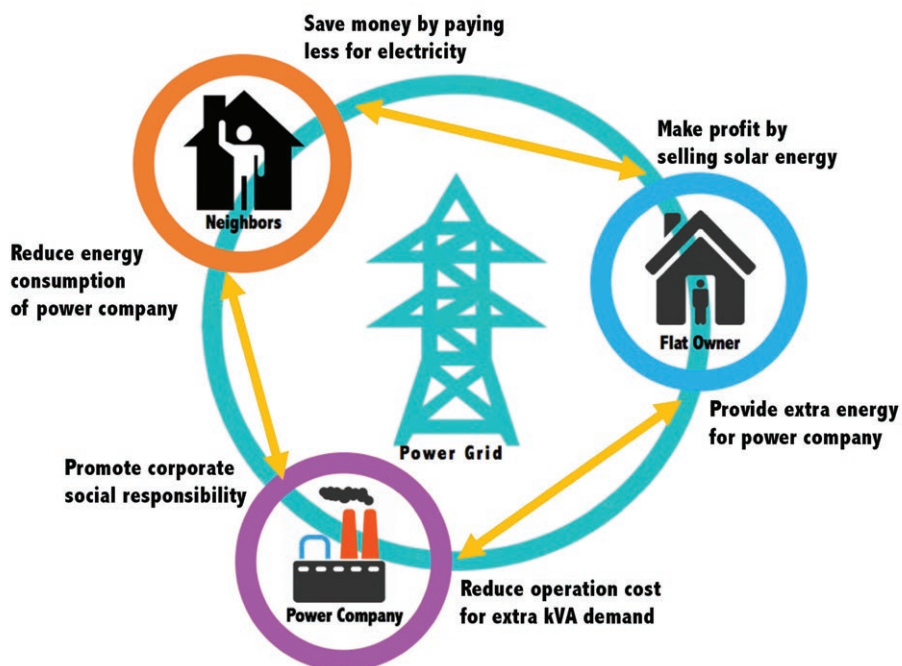
However, we could use the sharing economy to change this, and help build a more environmentally-friendly fuel mix. Hong Kong is a densely populated city with compact public and private buildings. A solar power exchange via a smart grid could help the transition to renewable energy. Low-cost solar panels on buildings could also create energy for use by citizens in their homes. This energy could be sold to others if the homeowners



wanted, at a price lower than what a large electric company would charge. Solar panels store energy all day long, so there might be a surplus of energy even after the homeowners sell some of it to their neighbours. This energy could even be sold to an electric company.

We could call this a "Smart Grid Energy Exchange". It would be a win-win scenario for all those involved. Homeowners would make money, their neighbours would save money, and the electric companies (with the extra electricity given back to them from the public) could stop stretching their budgets across power plants that don't need expanding.

With a sharing-based energy exchange market, we could all create a cleaner environment, produce less pollution, and promote better health all around.





Academic Development

HKIE Accreditation Visit



In October 2014, The Hong Kong Institution of Engineers (HKIE) granted provisional accreditation for our undergraduate programme, *BEng in Energy Science and Engineering (ESE)*. On 11 and 12 January 2018, the panel comprising the Chairman, members and assessor from HKIE visited SEE again for accreditation for ESE and another new programme, namely *BEng in Environmental Science and Engineering (EVE)*.

Accreditation visit is a key component of the whole accreditation process. Various activities such as meetings with the Provost, academic staff, external stakeholders, students and recent graduates, and visit to teaching and learning facilities, etc., were arranged to facilitate the visiting team to learn more about the two programmes. Both ESE and EVE programmes would be

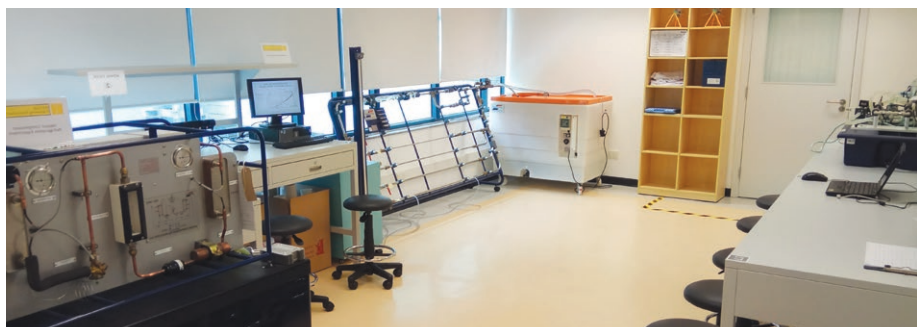
discussed and reviewed at the HKIE Accreditation Board meeting scheduled for 17 April 2018, with the final decision of the accreditation exercise to be made at the meeting.

New SEE Teaching Labs

Rooms Y-5401 and Y-5402 located in the Yellow Zone of the fifth floor of Yeung Kin Man Academic Building have been recently furnished and converted to a dry laboratory of SEE. In this laboratory, fluid mechanics, heat

exchange, vapour compression and air-conditioning experiments for thermofluid mechanic and building efficiency will be conducted for various SEE courses.

The Energy Management Laboratory just next to Room Y-5401 is now under progress. It is expected to provide perfect settings for our students to experience the practice of energy management in the industry and various energy management opportunities in real.



Student Activities

SEE Appreciation Reception cum Dinner



Over the years, SEE and our students have received tremendous support from the industry, enabling the students to enjoy a wide range of training and internship opportunities. These learning opportunities are significant for our students and graduates to develop a promising career in the energy and environmental industries.

On 15 September 2017, many of our friends from the industry had a wonderful evening with our students, alumni and faculty staff at the "SEE Appreciation Reception cum Dinner". Friends from ARUP, AT&T Engineering Group, Business Environment Council, CLP Power HK Limited, Siemens, and many more from the industry were our honourable guests. The reception was very well received with over 100 participants.

The reception served the purpose for SEE and our students to express our gratitude to our industrial partners. More importantly, industrial leaders, faculty members, students and alumni could network and share thoughts on the undergraduate education for the future energy and environmental engineers

for Hong Kong and the region. Student who took part in internship, and alumni who graduated in recent years were also invited to share their learning experience and recent work stories with their fellow schoolmates in the evening.

SEE Annual Gathering Dinner

In January 2018, SEE organised the "SEE Annual Gathering Dinner" to celebrate the start of the Year 2018 with the SEE family. The gathering also served as a perfect platform for our undergraduates, postgraduates, alumni, faculty members and staff to mingle with one another! Over 60 SEE members joined the dinner and had an unforgettable evening. The SEE Alumni Association also took pride to introduce the committee members and upcoming events to the fellow participants.



Student Exchange

Sharing by Chang Man Hei, Jeffrey (Cohort 2015, BEng in ESE)

I am now studying in Chalmers University of Technology (Göteborg, Sweden) as an exchange student. Studying abroad is a challenge, yet, it is also a gem. Studying in

the cold and gloomy darkness of Swedish winter with a group of energetic and fascinating students at Chalmers reminds me to "Stay Calm and Be Charm" (what an interesting homonyms!).

Sweden is a country that puts environmental protection and sustainability first. Citizens here segregate the trash into more than eight types of recycling materials; reuse bottles with refundable deposit and even import garbage from other countries to burn for energy.

I am now studying remote sensing, energy system modelling and environmental management. At Chalmers, there are also plenty of inspiring guest lectures from different industrial leaders. Apart from lectures, I seize the opportunities in connecting with people around our world. I have made new friends with peers from a mentoring group, "Phadder Group", and also with exchange students from National Chiao Tung University, Taiwan. Through city tours, ice skiing, European trips and festival celebrations, I have also gained lots of insights on how to make our planet more diverse. I do enjoy the student exchange life!

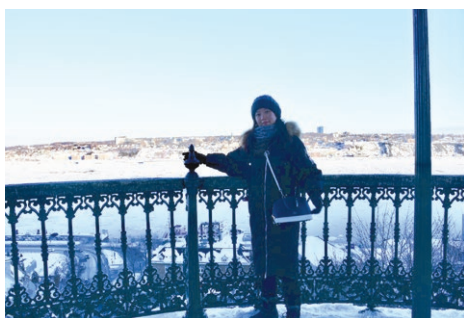


**Sharing by CHEN Yiran, Becky
(Cohort 2015, BEng in ESE)**



This year, I joined a semester-long student exchange programme at McGill University, Montreal, Canada. I have been fascinated to see Québec's bilingual culture of French and English, with all the interplay of vast wilderness and stylishness implied, that encompasses identities both distinctly North American and European.

At McGill, I learned about the ethics and opportunities of the engineering profession, the physics of producing, transporting and using energy in the context of environmental impact on a local and a global scale. It is a great pleasure for me to have the chance to be involved in actual project management with people from different walks of life. The format of assigned work varies from student debates to video-production. I also managed to take part in real-case consultancy, with well-rounded topics ranging from delivering new energy technology to the general public, the Canadian historical study of electricity supported by hydropower, and conflicts in orders of theories, ethics, and law regarding political dimensions of critical environments and resource use.



Apart from lectures, at the icy adventure playground in Québec, I tried out myriad winter activities the city offers: cross-country skiing, ice sledding in Carnaval de Québec, outdoor rave Igloofest electronic music festival, so on and on. Throughout the overseas experience, I have made friends from all over the world. The experience has made me stop stereotyping and even stepping forward with critical thinking, sincerity, and bravery. This exchange experience is definitely valuable for me to embrace the knowledge, the culture, and explore what kind of person I would like to be.

**Sharing by Fung Sin Yu, Claire
(Cohort 2015, BEng in ESE)**



Making new friends from different countries and experiencing international culture are what I treasure. I also would like to experience a new learning environment and culture during my university life. Considering all these, I have decided to be an exchange student in the University of Leeds.

The University of Leeds has an overwhelming learning atmosphere that motivates students to learn and improve. Fellow schoolmates and staff in the student accommodation are all



friendly and welcoming. We had fun in different activities such as the "Pancake Day"! Apart from academic studies and social life, the cultural exchange in Leeds also attracts me as Leeds has been the hometown of many notable artists and sculptors.

I am now stepping out from my comfort zone to be more independent and proactive. Going for a student exchange is something that I will not regret!

**Student Internship
Sharing by Cheung Ho Lam, Bryan
(Cohort 2014, BEng in ESE)**

Working in Schneider Electric as the Solution Engineer Intern for a year is unforgettable. Schneider Electric is a multinational corporation that specialises in energy management and automation solutions.

As an intern, I had to assist in the tendering stage of different government infrastructure projects and banks. Particularly, my supervisor let me work independently on a pilot project, it was eye-opening for me to deal with the clients and tackle obstacles.

Although the stay in Schneider Electric is only one year, I had the opportunities to work on a wide range of projects under the guidance of my supervisor and teammates. These experiences have enriched my insights on the engineering industry.

Schneider Electric provided a professional environment for me to experience the work life of an engineer. The training has also equipped me with more technical knowledge and personal development. I am grateful that I could be an intern in this company.





Upcoming SEE Student Activities

Mentorship Programme 2018

In collaboration with SEE Alumni Association and CityU DBA (Doctor of Business Administration) Community Limited, SEE has launched the first-and-ever “SEE Mentorship Programme”.

Mentors of this Programme are all senior members of well-established companies. They are:

- Mr. Bryan Tsang (Deputy General Manager, CGN New Energy Holdings Co., Ltd.)
- Mr. Raymond Ng (CEO, Karin Technology Holdings Limited)
- Mr. MF Sham (Executive Vice President, ECO Environmental Investment Limited, Towngas Group)
- Ir. Dr Barry LEE (Director, ATAL Engineering Limited)
- Mr. Jude Chow (Group Managing Director, Associated Engineers Limited)
- Mr. Rajeev Chib (Director and Regional Head, Client Facilitation and Business Unit Management for Investor Sales and Relationship Management for the Asia Pacific region, Citi)

Current SEE Year-2 and Year-3 undergraduates who are accepted to the mentorship programme will be assigned to one of the mentors as mentees until July 2019. It is a golden opportunity for undergraduates to seek professional advice on career, professional life and various topics from the experienced and senior management of different well-known companies. It will provide the students with a stronger foundation before they step into the career world.

Summer Programme 2018

To widen students’ horizons, SEE will continue to organise the overseas study programme for SEE undergraduates in 2018 summer. This year, students will participate in Summer Programmes hosted by overseas institutions, namely, Hanyang University (Seoul, South Korea and INSA Lyon (Lyon, France). Year-1 to Year-3 undergraduates joining the summer programmes will take the courses offered by the host institutions and take part in cultural immersion activities.

Summer Internship 2018

SEE is dedicated to inspiring our students to think out-of-the-box and learn outside classroom. Every year, a range of summer internship opportunities are arranged with the industrial partners for the undergraduates. Similar to previous summers, around 20 of our undergraduates will be nominated to well-established companies in energy and environmental-related fields to gain real-life work experience. The summer internship is expected to commence in June 2018.



Students Achievements

Best paper at 23rd International Clean Air and Environment Conference

Miss Xing Yang, a PhD student supervised by Professor Peter Brimblecombe, won the Best Paper award and Emerging Air Quality Professionals Achievers Award at the “23rd International Clean Air and Environment Conference” in Brisbane on her paper titled “Dispersion of Traffic Derived Air Pollutants into Urban Parks”.

Dean’s List in Semester A, 2017-18

According to the University regulations, undergraduate students will be placed on the Dean’s List by earning 12 credit units or more with a grade point average (GPA) of 3.7 or above and no failures over the previous semester.

SEE is pleased to announce that the following undergraduate students have been placed on the Dean’s List for Semester A, 2017-18.



Name	Year of study	Cohort
LAW Tsz Kwan Violet	4	2014
LEE Chak Hei	4	2014
LEE Lok Ting	4	2014
WONG Chun Ho	4	2014
WOO Hau Pok	4	2014
CHANG Man Hei Jeffrey	3	2015
CHEN Yiran	3	2015
ZHU Minxin	3	2015
CHIA Chen Hsuan	2	2016
GAO Congyu	2	2017
XIAO Lingran	2	2016
YUEN Hin Tung	2	2016
ZHOU Yujing	2	2016
CAKIN Ezgi	1	2017
EZZAT Yahia Hussein Mahmoud Rashad	1	2017
GAO Yu	1	2017

Seven Attributes of Our Graduates

We live in a rapidly changing society. At SEE, we are tasked with the mission to train future engineers and professionals who can solve our current and future challenges. We aim to develop our students to have Seven Attributes, namely, technically competent, interdisciplinary, innovative and entrepreneurial, problem solvers, effective communicators, life-long learners and leaders with a global vision.

To enable our students to keep track of their progress in developing the Seven Attributes, an online system has been established to allow students to record and reflect their development. Furthermore, a series of workshops are being held regularly to strategically train our students on various aspects of the Seven Attributes.

Technically competent



Interdisciplinary



Innovative and entrepreneurial



Problem solvers



Effective communicators



Life-long learners



Leaders with a global vision



Alumni Association Membership Recruitment

With the expansion in SEE alumni family that now also includes graduates from Bachelor's degree programme, the alumni association will be renamed to The CityU Alumni Association of School of Energy and Environment Limited (CAASEE). It is an alumni group that contributes to encouraging all alumni to stay connected. The missions include:

- strengthening bonds between alumni and SEE
- acting as a major platform for alumni engagement
- promoting the welfare of SEE by serving as advocates for the SEE
- establishing a mutually beneficial relationship between SEE and its alumni by providing tangible benefits including career services, networking opportunities, events, lectures, etc.

JOIN US!

Editorial Team

Professor Chak K Chan, *Dean*
Dr. Walid Daoud, *Associate Professor*
Dr. Sam Hsu, *Assistant Professor*
Dr. Liu Chunhua, *Assistant Professor*
Dr. Keith Ngan, *Assistant Professor*
Dr. Denis Yu, *Assistant Professor*
Ms. Alice Wong, *School Secretary*
Miss Vivian Kong, *Executive Officer*

CityU Alumni Association of School of Energy and Environment Limited

(Provisional)

Membership Application Form

General Information

Graduate Year: _____

Name of Most Recent Programme:

- Doctor of Philosophy (Ph.D.) Bachelor of Engineering (BEng) in Energy Science and Engineering
 Master of Philosophy (M.Phil.) Master of Science (MSc) in Energy and Environment

Personal Particulars

Name: _____ (English) _____ (Chinese as applicable)

Nickname: _____ Gender: _____ Mobile phone No.: _____

Email address: _____ WeChat ID: _____ (Optional)

Current Status

- Full-time employment Part-time employment Self-employment Employment seeking
 Further Studies Others (please specify): _____

Employment Status (if employed)

Name of Employer: _____ Year of Service: _____

Department : _____ Current Job Title: _____

I have read Personal Data (Privacy) Notice – Use of Personal Data and agree to those terms:

Applicant's signature: _____ Date: _____

Personal Data (Privacy) Notice – Use of Personal Data

People who supply data in their application to the CityU Alumni Association of School of Energy and Environment Limited are advised to note the following points, pursuant to the Personal Data (Privacy) Ordinance:

1. Personal data provided in this application form will, during the entire process, be used solely for this purpose, and in this connection, the data will be handled by the Association's staff or by any committee members of the Association who is directly involved in the administration of this application.
2. After the applications have been processed and the relevant exercise completed, the application papers/eForm of successful candidates will become part of the file which the Association open for each member.
3. Under the provisions of the Person Data (Privacy) Ordinance, applicants have rights to request access to, and to request the correction of, their personal data. Applicants wishing to access or make corrections to their data should send email to the see.enquiry@cityu.edu.hk

Declaration

1. I have noted the general points pursuant to the Personal Data (Privacy) Ordinance.
2. I authorize the CityU Alumni Association of School of Energy and Environment Limited or any other office that is directly involved in the administration of this application to use, check and process my data as required for my application.
3. I understand upon successful application, my data will become a part of my member record and may be used for all purposes as prescribed under relevant rules and regulations, as long as I remain member of this Association.

General Enquiry

Phone: +(852)-3442-2410 / 3442-2414

Fax: +(852)-3442-0688

Email: see.enquiry@cityu.edu.hk

Address: G5702, 5/F, Yeung Kin Man Academic Building, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong SAR