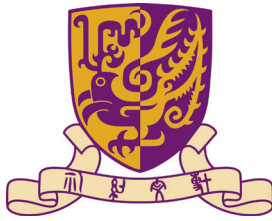




香港中文大學
The Chinese University of Hong Kong

FACULTY OF ENGINEERING

ANNUAL AWARDS PRESENTATION



THE CHINESE UNIVERSITY OF HONG KONG
FACULTY OF ENGINEERING

Annual Awards Presentation

PROGRAMME

2 July 2022 (Saturday)

Welcome Address by Professor Martin D. F. WONG

Dean of Engineering, CUHK

Presentation of Awards:

- Outstanding Tutors Awards
Presented by Professor Tan LEE
Associate Dean (Education)
- Faculty Service Awards
Presented by Professor Martin D.F. WONG
Dean of Engineering
- Dean's Exemplary Teaching Awards
Presented by Professor Martin D.F. WONG
Dean of Engineering
- Outstanding Thesis Awards
Presented by Professor Hon Ki TSANG
Associate Dean (Research)
- Research Excellence Awards
Presented by Professor Hon Ki TSANG
Associate Dean (Research)
- Hang Seng Bank FinTecubator Scholarship
Presented by Mr Leo K.F. WONG
*Head of Wealth and Personal Banking IT
Hang Seng Bank*

Words from the Dean



Congratulations to the winners of this year's Faculty of Engineering awards! Thank you so much for your great contributions to the research and education missions of the Faculty. We are very proud of you!

The Faculty of Engineering has been well recognized internationally for its excellence in engineering research. Our world-class faculty members have been working closely with government and industry in developing new technologies to meet the societal needs and improve the quality of mankind. The industrial revolution and the information age have

changed the course of history. Engineers must shoulder growing responsibilities for the betterment of mankind. We are now in the midst of the "Fourth Industrial Revolution", fusing the physical, digital and biological worlds. The convergence of the Internet of Things, Artificial Intelligence, robotics, data science, biotechnology, materials engineering, microelectronics, autonomous vehicles, advanced manufacturing, and nanotechnology are poised to disrupt every industry and every aspect of modern life. CUHK Engineering must work together with other Faculties and Industries to play a key role in shaping the Fourth Industrial Revolution. In the years ahead, we will continue to strengthen our teaching and research excellence, as well as responding to the grand challenges facing the world.

A lot has happened in Hong Kong in the past few years, especially the ongoing COVID pandemic. As many countries are lifting their COVID restrictions, we see signs that the pandemic will end soon. But even during the most trying times, our faculty members and graduate students have managed to conduct state-of-the-art research, publish research findings at top journals, win prestigious international awards, establish new large-scale research centers, and found startups. Moreover, innovation in technologies has played a major role in keeping the society to function as normal as possible even without face-to-face interactions, showcasing the power of Engineering! We are in the right profession that can make a difference!

Once again, congratulations to all the winners of this year's awards. Please keep up the good work!

A handwritten signature in black ink, appearing to read "Martin Wong".

Martin D. F. Wong
Dean of Engineering

Outstanding Tutors Awards 2021

Mr. LEE Kit Cheung Leo (李傑翔)

Biomedical Engineering Department

Mr. Leo Lee received the Bachelor of Engineering Degree (Biomedical Engineering) from The Chinese University of Hong Kong (CUHK) in 2018. As he continued his studies at CUHK BME, he served as a tutor for undergraduate courses including Introduction to Biomedical Engineering (BMEG 2001), Molecular and Cellular Engineering Laboratory (BMEG 3140), Biofluids (BMEG 3210) and Bionanotechnology (BMEG 4450) under the supervision of Professor Jonathan CHOI.

Mr. Lee has always considered it a privilege to participate in developing the BME courses for the undergraduate students. Finding ways to let all the students have a taste of different topics within biomedical engineering at the very beginning is not easy, but the use of flip-class mode and online resources helps the students engage and improve their learning experiences. During his time as a laboratory tutor, he felt honored to teach the students wet-lab techniques and theories so that they were well equipped with all the basic skills they needed to further progress in the world of molecular biology. He also enjoyed the challenge of helping students to model biofluid systems using mathematical and computational tools – important foundational skills that every biomedical engineer should gain before going further in their studies.

Mr. LIN Shiju (林仕居)

Computer Science & Engineering Department

Mr. Lin received his Bachelor of Engineering Degree in 2020 from the South China University of Technology. He is currently a second year PhD student supervised by Professor Evangeline F.Y. YOUNG. During the 2020-2021 academic year he was a TA for Formal Languages and Automata Theory (CSCI3130) and Design and Analysis of Algorithms (CSCI3160). Mr. Lin is an enthusiastic and patient teacher who tries his best to make the tutorials and answers clear, concise and easy to follow. He was the only TA for CSCI3160 who was physically in Hong Kong, and therefore had more responsibilities and work, such as grading all the onsite exam papers. He also created a shared OneDrive account and uploaded course materials regularly for any students or TAs who had trouble accessing the course website because of unstable VPN connections. He is always happy to help students and gives swift replies to their questions and requests. He has received many positive comments from students.

Miss LIU Ya (劉雅)

Electronic Engineering Department

Miss Liu received her Bachelor of Engineering Degree from the University of Electronic Science and Technology of China (UESTC). She is currently under the supervision of Professor MA Wing Kin from the Department of Electronic Engineering. From 2018 to 2021, she served as a tutor for several courses, including Principles of Communication Systems (ENGG2310), Signal and Systems (ENGG2030) and corresponding laboratory courses, working with Professor Ma Wing Kin, Ms. NGAN Lai Yin, and Professor CHAM Wai Kuen.

Miss Liu loves teaching and gains great enjoyment from the process of imparting knowledge. In addition to being a helper for teachers, posting announcements on Blackboard, marking assignments, etc., she spends a lot of time preparing tutorials to help students better understand the course content. She always gives detailed explanations and notes based on her clear understanding of the course content. She encourages students to ask questions to help them gain a deeper understanding, and responds promptly to students' emails. Her enthusiastic and patient teaching has been well received by students and teachers alike.

Mr. PENG Zhenghao (彭正皓)

Information Engineering Department

This is the second time that Mr. Peng has been nominated for the Faculty's Outstanding Tutors Award. He served as the leading tutor for the Reinforcement Learning course (IERG5350) taught by Professor Bolei ZHOU, providing excellent professional services to both the students and the lecturer. He designed engaging assignments that the students found interesting and stimulating. He answered students' inquiries enthusiastically and in a timely manner. His dedication to the tutorship and the passion for helping others, achieving learning objectives and facilitating effective teaching in class are highly appreciated by the students and the lecturer.

Mr. QIN Mian (秦勉)

Mechanical & Automation Engineering Department

Mr. Qin is currently a fourth-year PhD student in the Mechanical and Automation Engineering Department, supervised by Professor LIAO Wei Hsin. During 2020-2021 he served as the teaching assistant for two courses: Energy and Green Society (UGEB 1307), and Robots in Action (UGEB2303). He is very patient and enthusiastic in facilitating student learning. When certain lab sessions could not be conducted as usual during the COVID-19 pandemic, he spent a lot of time preparing materials, assembling the necessary mechanical parts and recording videos for students. He introduced the tutorials for conducting the experiments in detail, including basic theoretical knowledge related to practical applications to help students have a better understanding of what they have learned. His course instructor is very appreciative of his diligence and the feedback from students is also positive. In Mr. Qin's case the Outstanding Tutors Award 2021 is well deserved.

Ms. HE Yiran (賀意然)

Systems Engineering & Engineering Management Department

Ms. He received her Bachelor of Engineering Degree from The Chinese University of Hong Kong. She is currently a third-year PhD student under the supervision of Professor WAI Hoi To. In 2020-2021, she served as TA for the undergraduate courses Discrete Mathematics for Engineers (ENGG2440B) and Optimization Methods (FTEC2101/ESTR2520). When the courses were moved online due to the COVID-19 pandemic, she delivered effective tutorial sessions with enthusiasm and patience. Her care for students is reflected by the top CTE scores received. Behind the scenes, Yiran has provided excellent support to the instructor in answering questions from students and grading assignments and projects, etc. She was also responsible for grading the final project reports, particularly for FTEC2101/ESTR2520. Even though this involved a lot of work, she completed the tasks without delay. She is undoubtedly one of the most responsible TAs in the Department.

Faculty Service Awards 2021

The Faculty Service Awards are presented to the following staff members in appreciation of their tireless effort and dedication in serving the faculty and the departments in recent years:

Ms. TANG Hoi Yan Cathy (鄧堽恩)

Biomedical Engineering Department

Ms. Cathy Tang joined the Biomedical Engineering Department as Project Coordinator II in 2018. Cathy takes care of curriculum, teaching and learning, undergraduate admission and tasks related to the undergraduate programme in the department. She always has a positive and enthusiastic approach to her work and has made a significant contribution in formulating an effective strategy for continued improvement in admission quality. She excels in analytical thinking, always able to grasp the intricacies of different policies related to our curriculum and visualize the bigger picture. Her insights have been invaluable in refining our programme. In light of Cathy's contributions, the Faculty Service Award is well deserved.

Mr. WU Siu Tung Tony (胡少東)

Computer Science & Engineering Department

Mr. Tony Wu joined the Computer Science and Engineering Department (CSE) as a Computer Technician in 1995. He was promoted to Computer Supervisor in 2001. He provides support in managing the department's computer laboratories. He also built the Windows domain for the department. He is responsible for upgrading and updating the machines in the laboratories in order to conform to the university's security policy, as well as providing excellent and responsive technical support service to the staff and students. He also handles sourcing, issuing tenders and purchasing computer equipment for the department and various other projects. Tony is a responsible, professional and dependable colleague. We truly appreciate Tony's contributions to the CSE Department over the past 25 years.

Mr. CHIK Cho Yiu Francis (戚祖耀)

Electronic Engineering Department

Mr. Francis Chik joined the Electronic Engineering Department (EE) in 2017 as a Technician. He possesses a high level of professional knowledge and is able to handle inquiries and resolve technical problems in an effective manner. He is responsible for taking care of the computing laboratory, computer network, computer system, website and web applications, etc. He brings enormous passion to this work and is always ready to update his knowledge of the latest computer technologies. He is a valuable EE team member with a dedication to his work, and often takes the initiative in supporting our students and colleagues to the very best of his ability. He fully deserves the Faculty Service Award in recognition of his outstanding contributions.

Ms. SHUM Wai Yee Connie (岑蕙儀)

Information Engineering Department

Ms. Connie Shum joined the department in 2011 as General Clerk II. She has supported the research postgraduate programme since she joined the department and has greatly contributed to the smooth running of the graduate division. Her coordination and support of the research postgraduate programme have been truly outstanding. She demonstrates a thorough knowledge of the area she is responsible for and continues to develop the breadth and depth of her skills in order to carry out her work to the highest standard. She brings a very positive attitude to her role, and her performance often exceeds expectations.

Over the years, Connie has successfully built connections between the postgraduate students, their supervisors and the Graduate School, and maintains very good relationships with the students as well. She is an excellent team player and is happy working with colleagues at all levels. She is also knowledgeable about other aspects outside her field of postgraduate studies.

Her wonderful contribution to the department over the years is highly appreciated by the faculty members. She is an asset to the department and we are delighted to see her receive the Faculty Service Award.

Ms. WONG Mei Ha Joyce (黃美霞)

Mechanical & Automation Engineering Department

Ms. Joyce Wong joined the department in 1995 and currently serves as General Clerk I. Besides her various administrative duties in the general office, she is the point of contact for all issues concerning the research postgraduate programmes. She always works hard, completing her work independently with a patient, polite and friendly manner. She has demonstrated a consistent dedication in carrying out her numerous assigned duties with a very good knowledge of the university's regulations and administrative procedures. With her extensive experience, she has helped support the office operation efficiently. Staff and students are always impressed by her substantial contribution to our research programmes, in terms of administrative support and student care throughout the years. She fully deserves the recognition of the Faculty Service Award for her exemplary performance.

Ms. HO Shuk Chun Monica (何淑珍)

Systems Engineering & Engineering Management Department

Ms. Monica Ho has served as the department's Executive Assistant for over two decades. She is very diligent and devoted, not only in overseeing that proper administrative procedures are followed in compliance with university guidelines, but also in staying abreast of diversified and rapid transformations in many workflows and systems. She is enthusiastic and capable of identifying issues that arise and addressing them appropriately. She is a proactive and careful planner who manages the multitude of departmental activities with smoothness and efficiency. She ensures the administrative processes are implemented in a fair and orderly manner, protecting the interests of the department, its faculty and students. The department greatly appreciates Monica's years of dedication, and considers this award to be very well deserved.

Dean's Exemplary Teaching Awards 2021

Professor TONG Kai Yu Raymond (湯啟宇)

Biomedical Engineering Department

Professor Raymond Tong has a strong belief in four key factors: exploration, reframing, togetherness and achievements, and this has led to continued success. Firstly, his teaching embodies the saying, 'all roads lead to Rome', as students are encouraged to take the initiative and explore multiple methods of achieving the same ends, through participation in competitions, research projects and resolving open-ended questions. Secondly, he helps students reframe their mindset, redefining the teacher's role through equipping students with creative curiosity and igniting their passion for lifelong learning. Thirdly, he encourages students to establish relationships based on mutual trust and achieve common goals together through interactions, compromises and mutual support in the spirit of togetherness. Fourthly, he encourages and celebrates students' achievements in competitions, seeing them build confidence ready to embrace future challenges and bring dedication and devotion to their eventual professions.

Professor Tong is keen on sharing his inspiring research journeys, Hand of Hope and Hope4Care, with students, from the initial stage of designing concepts, developing prototypes and conducting validations through the intermediate stage of patent's applications and clinical trials, to the final stage of using the inventions in rehabilitation centres in Hong Kong and worldwide. He and his research team are committed to serving the community. In 2021, amid the COVID-19 pandemic, he recruited 48 student helpers from various programmes, including biomedical engineering, medicine, nursing, social work and physiotherapy, to participate in a project aimed at developing four rehabilitation technologies for patients in 32 rehabilitation centres and 54 stroke survivors at home. Students gained hands-on experience of how inventions developed in the university's research laboratory directly improved the quality of patients' lives when the stroke survivors could continue their rehabilitation exercises with AR technology at home throughout the waves of COVID-19. Professor Tong believes that innovation, open-mindedness and a can-do spirit can unleash each student's full potential, so that they can contribute to society by conquering any challenges ahead.

Professor TAO Yufei (陶宇飛)

Computer Science & Engineering Department

Professor Tao teaches courses on mathematics and the theoretical aspects of computer science. The courses include ENGG1410 Linear Algebra and Vector Calculus, CSCI2100/ESTR2102 Data Structures, CSCI3160 Design and Analysis of Algorithms, CSCI5010 Computational Geometry, CSCI5020 External Memory Data Structures, CSCI5610 Advanced Data Structures, among others. His teaching material is publicly available on his homepage. Professor Tao is proud to receive the Dean's Exemplary Teaching Award for the second time, and he is grateful for all the support he has received from his students.

Professor LEE Tan (李丹)*Electronic Engineering Department*

Professor Lee is proud of being a graduate of CUHK Electronic Engineering. His teaching career has been enormously influenced by numerous senior professors in this department and throughout the university. As a novice teacher, he thought that his role was just to help students understand what they were supposed to learn according to the syllabus. He tried his best to develop and improve his lecturing skills to make complicated technical content easier to understand, and many students liked to attend his lectures. But one day, things changed. A student came to his office and politely suggested, ‘Professor, I wonder if you would consider leaving a bit more room for students to think for ourselves, rather than telling us everything’. After that he spent some time reflecting seriously on what he believed. He started to accept that students can – and indeed need to – learn by themselves. The teacher’s role is mainly to guide, inspire and encourage students as well as resolving points of confusion. He also sees the importance of understanding students’ individual differences, not only in their abilities but also in their learning styles. The traditional settings of learning and assessment might not suit students of different personality types. He likes to interact with students outside the classroom and is always satisfied when he sees a student achieve their life goals through pursuing knowledge and continuous reflection.

Dr. HO Marco (何震宇)*Information Engineering Department*

Each student is unique and different, and so is their way of learning. Dr. Ho addresses his students’ needs individually by providing multiple approaches in teaching the same concept and choosing the best one individually for different students. This personalized teaching style allows him to identify weaknesses in teaching plans and to apply different teaching techniques to different courses. Students become more confident in their learning by choosing an avenue that best suits their learning style. His friendliness can also be found in his encouragement to students, and he is always happy to entertain even the most elementary questions from students. By telling students that ‘there are no stupid questions, only stupid answers’, he alleviates the students’ concerns around asking the ‘wrong’ questions. Feedback from students is also an important part of his pedagogy, as it allows him to reflect on and gauge the effectiveness of his teaching and continuously improve the learning experience.

Dr. HAN Dongkun (韓東昆)

Mechanical & Automation Engineering Department

Engineering is a creative way of applying knowledge to solve practical problems. In order to move engineering education from understanding to action, Dr. Han has been exploring the use of the Smart Garden Teaching and Learning Platform in teaching about energy. During lectures, students are encouraged to apply their knowledge to develop various renewable energy devices. This platform is open to the public and helps a wide range of people to take action and move towards living a more sustainable life. Under COVID-19, he attempted a flipped online laboratory in teaching robotics, where an online (synchronous) unmanned robotic lab was conducted with the help of flipped (asynchronous) lab instructions. His team also built a ‘cloud teacher’: a text-based conversational agent for answering robotics questions from students via machine learning technologies. He has organized several workshops and developed a series of micro-modules to improve students’ presentation skills and has also initiated outdoor lectures to enhance students’ no-slide presentation skills. He humbly believes that these endeavours in pursuing effective teaching and learning help make both him and his students better learners and thinkers.

Professor LONG Zhuoyu Daniel (龍卓瑜)

Systems Engineering & Engineering Management Department

Professor Long regards teaching as a privilege, believing that it is only through teaching and being involved with students that we can stay in touch with today’s energetic young talents. He also considers teaching to be a responsibility in today’s rapidly evolving global environment. Society entrusts and empowers the academic body to educate and develop young people. In return, it requires us to be committed to nurturing them by effectively teaching knowledge at the frontier of our understanding, and by training them to be critical thinkers and effective problem solvers. To this end, the most important factor is that both students and teachers enjoy and respect the process. He firmly believes that students can intuitively sense whether lecturers are committed and enthusiastic about getting their point of view across, and hence we must find ways to bring enjoyment and enthusiasm to our engagement with students.

Outstanding Thesis Awards 2020

Winner: Mr. HOU Yifan (侯逸帆)

Computer Science & Engineering Department

MPhil thesis entitled “Measuring and Improving the Use of Graph Information in Graph Neural Networks”

Supervisor: Professor YANG Ming Chang (楊明昌)

Abstract of Mr. Hou’s Thesis:

Representation learning on graphs, also called graph embedding, has demonstrated its significant impact on a series of machine learning applications such as classification, prediction and recommendation. Graph neural networks (GNNs) have been widely used for representation learning on graph data. However, existing work has largely ignored the rich information contained in the properties (or attributes) of both nodes and edges of graphs in modern applications, e.g., those represented by property graphs. Besides, there is limited understanding on how much performance GNNs actually gain from graph data.

In this thesis, we have two main contributions. First, we propose PGE, a graph neural networks framework that incorporates both node and edge properties into the graph embedding procedure. PGE uses node clustering to assign biases to differentiate neighbors of a node and leverages multiple data-driven matrices to aggregate the property information of neighbors sampled based on a biased strategy. PGE adopts the popular inductive model for neighborhood aggregation. Second, we introduce a context-surrounding GNN framework and propose two smoothness metrics to measure the quantity and quality of information obtained from graph data. A new GNN model, called CS-GNN, is then designed to improve the use of graph information based on the smoothness values of a graph. CS-GNN is shown to achieve better performance than existing methods in different types of real graphs.

Winner: Dr. CAI Mingjing (蔡明京)

Mechanical & Automation Engineering Department

PhD thesis entitled “Kinetic Energy Harvesting from Human Limbs Swing Based on Electromagnetic Transducer”

Supervisor: Professor LIAO Wei Hsin (廖維新)

Abstract of Dr. CAI’s Thesis:

The implementation of Internet of Thing (IoT) requires sustainable power supply. While the wearable devices commonly rely on the conventional batteries, the working time is significantly constrained by the limited battery capacity. Harvesting the kinetic energy from the motion of human limbs swinging provides promising energy supply for IoT applications. However, there is still large gap between the power requirement of IoT applications and the electricity produced. In this thesis, starting from the fundamental structure and principle, the human limbs swinging excited energy harvesters were systematically investigated towards boosting the power generation performance.

Targeted at high power density, proof-massless energy harvester was first explored, which utilized the electromagnetic transducer as inertial weight to obtain sufficient energy capture capacity and reduce the volume. Composed of a sun gear and an electromagnetic transducer serving as inertial weight simultaneously, the planetary structure enables the energy harvester to require no additional proof mass. An analytical model was built to estimate the system performance and make comparison with conventional structure. The simulations unveiled that the proof-massless design significantly outperformed the conventional energy harvester and set high baseline for output power and power density. A miniature prototype with volume of 3.21 cm³ was fabricated and experimentally characterized under pseudo-walking excitation with various frequencies and amplitudes. With the maximum power of 1.46 mW and power density of 454.82 μW/cm³, the proof-massless energy harvester significantly outperformed the counterparts. This result demonstrated the preponderance of proof-massless design for the limbs swinging excited energy harvesters. In addition, the output power of the device worn on the wrist and the ankle under real walking excitation was 1.84 mW and 2.95 mW, respectively. With an interface circuit, the prototype was used to fully power a pedometer at various walking speeds, realizing self-powered IoT applications.

In the interest of enhancing the power output, we also investigated a repulsive magnetic spring with minimal size to change the system dynamics. With inverted magnetic potential energy, the system potential energy well depth can be effectively lowered so that the response amplitude was increased. The principle of the repulsive magnetic spring was discussed, and the energy harvester was designed accordingly. Based on the constructed analytical models of power generation, magnetic spring and system dynamics, the effect of magnets’ air gap on system potential energy and dynamics was theoretically investigated, which showed good agreement with the experiments. A prototype was fabricated to characterize the energy harvester and the optimal load resistance was verified under constant driving speed. Under pseudo-walking excitations with various walking frequencies, the output power of different air gap configurations was measured, which revealed that up to 425% of improvement on output power was achieved compared with conventional energy harvester. In addition, at the same frequency, smaller air gap resulted in higher power.

Finally, an embedded energy harvester using magnetic frequency-up converter to improve the energy conversion capacity was developed. By adopting coaxial topology, a motion capture unit, magnetic frequency-up converter and a power generation unit can be integrated in a highly compact device. The principle of magnetic frequency-up converter was illustrated, and the embedded energy harvester was designed. Analytical model was constructed to predict the system dynamics and power generation while finite element model was employed to analyze magnetic field distribution and transmission of the magnetic frequency-up converter. Using the constructed model, the wire diameter and layer number of the coils were determined via parametric study. The parametric study also revealed that there are optimal inertial weight and transmission ratio for the power output and power density, respectively. A highly compact prototype was fabricated and characterized under constant driving speed. Under pseudo-walking excitations, the maximum power and normalized power density, respectively, achieved 1.74 mW and $844.54 \mu\text{W}/\text{cm}^3 \cdot \text{Hz}^2$, which were 4 and 10 times that of previous works. With significant improvement, the embedded energy harvester enables a variety of commercial wearables to be self-powered.

Towards self-powered IoT applications, the investigations provide promising power enhancement methods for human limbs swinging excited energy harvesters from different perspectives and would lay solid foundation for addressing the bottlenecked issue of IoT.

Outstanding Thesis Awards 2021

Winner: Mr. LI Wei (李巍)

Computer Science & Engineering Department

MPhil thesis entitled “Irregular Deep Data Embedding and Learning”

Supervisor: Professor YU Bei (余備)

Abstract of Mr. Li’s Thesis:

Many research objects are organized under the non-Euclidean structure and often called irregular data. Irregular data, such as graphs and point clouds, often vary in terms of the size and scale, making some analytics methods infeasible due to its un-fixed scale and possible prohibitive cost for some huge cases. To overcome these issues, the study of data embedding method is essential for irregular data.

Among all data embedding methods, deep learning is the most successful one. However, it is hard to directly apply neural networks that perform well on the Euclidean domain to the non-Euclidean domain. Compared with regular data under a grid-like structure, irregular data loses some critical properties like shift invariance that are one of the key reasons for the success of deep learning. The thesis will discuss how deep learning models are applied for two representative irregular data representations, graph and point cloud.

For the graph embedding, we study its applications in multiple patterning lithography decomposition (MPLD) problem and the graph coloring problem. MPLD has been widely investigated, but so far there is no decomposer that dominates others in terms of both the optimality and the efficiency. This observation motivates us exploring how to adaptively select the most suitable MPLD strategy for a given layout graph, which is non-trivial and still an open problem. We propose a layout decomposition framework based on graph neural networks (GNNs) to obtain the graph embeddings of the layout. The graph embeddings are used for graph library construction, decomposer selection and graph matching. Besides the applications in the industrial workflow, we study the power of GNNs for a pure graph coloring problem from three perspectives. First, we extend the theoretical analysis of GNNs from tasks under homophily to heterophily, and prove that previous definitions on the power of GNNs cannot generalize to a task under heterophily including the coloring problem. Furthermore, we show that any AC-GNN is a local coloring method, and any local coloring method is non-optimal. Following the discussions above, we develop a global GNN-based approach by un-supervised learning, which proves to enhance its ability in graph coloring.

For the point cloud embedding, we focus on its application on the routing tree construction problem. In the routing tree construction, both wirelength (WL) and pathlength (PL) are of importance. Among all methods, PD-II and SALT are the two most prominent ones. However, neither PD-II nor SALT always dominates the other one in terms of both WL and PL for all nets. In addition, estimating the best parameters for both algorithms is still under discussion. We model the pins of a net as point cloud and formalize a set of special properties of such point cloud. Considering these properties, we propose a novel deep neural net architecture, TreeNet, to obtain the embedding of the point cloud. Based on the obtained cloud embedding, an adaptive workflow is designed for the routing tree construction. In the workflow, the cloud embedding is used to select the algorithm and predict the balance parameter.

Winner: Dr. MA Jingwen (馬靜文)

Electronic Engineering Department

PhD thesis entitled “Topological Integrated Circuits using Light and Sound”

Supervisor: Professor SUN Xiankai (孫賢開)

Abstract of Dr. Ma’s Thesis:

The field of photonic and phononic integrated circuits is gaining significant momentum because it allows cost-effective fabrication of nano-devices for high-speed optical and radio-frequency signal processing and their seamless integration with microelectronics on a chip. In these integrated circuit systems, optical and mechanical waves can be electrically generated, manipulated, and detected on a single chip. However, their behaviors are vulnerable to undesired structural variations caused by imperfect nanofabrication processes, which limits further increase of scalability and functionality of large-scale integrated networks.

In this thesis, I focused on constructing photonic and phononic integrated circuits with fundamentally enhanced robustness by using a fundamental physics phenomena called topological insulators. Topological insulators originate from condensed-matter physics, and they are a unique material that is insulating in its bulk but allows high-speed propagation of electrons on its edges. Similarly, I created and constructed topological insulators for photons and phonons by using nano-fabrication technologies, so that photons and phonons can propagate along desired routines without backscattering even in presence of large scatterers. Besides, I further introduced the concept of Angel particles from condensed-matter physics into the field of micro-electromechanics systems (MEMS). Based on that, I created the first MEMS oscillators with topologically protected robustness against random fabrication variations. These results not only find practical applications of robust on-chip signal processing using nano-photonics and MEMS technologies, but also open the door to experimentally investigate novel topological physics at nanoscale.

Winner: Dr. FANG Shitong (方仕童)

Mechanical & Automation Engineering Department

PhD thesis entitled “Broadband Rotational Energy Harvesting Using Nonlinearity and Centrifugal Effects”

Supervisor: Professor LIAO Wei Hsin (廖維新)

Abstract of Dr. Fang’s Thesis:

Harvesting the rotational energy has drawn great attention in the past decade with its abundance in our living environment and its great potential to achieve the self-powered wireless sensor network. However, issues exist that small-scale and resonant-frequency-based linear harvesters typically have high natural frequencies and narrow operating frequency bandwidths. Therefore, the aims of this thesis are to propose novel harvesters for broadband and low-frequency rotations, and to reveal their deep mechanisms via modeling, simulation and experiments.

Plucking/impact nonlinearity has been proved to be an efficient method to convert low-frequency excitations to high-frequency vibrations. In this thesis, an asymmetric bi-stable plucking energy harvester is firstly proposed to trigger the high-energy orbit of the bi-stable harvester with plucking force, the power of which is increased by up to 29.8% compared with that of the linear one. Furthermore, this thesis further proposes a comprehensive multiple plucking model to investigate the influence of vibrational interference on the plucking energy harvesters. In addition, in order to reduce the negative effects of vibrational interference, a music-box-like extended plucking energy harvester is proposed. It is validated that the bandwidth of this proposed harvester can be broadened by 85.7% than that of the conventional one.

Besides plucking, impact can be utilized to improve the low-frequency energy output as well. Utilizing the gravity excitation, an impact harvester is proposed to not only avoid but also utilize the static instability caused by the centrifugal softening effect. The maximum output power at low rotational frequencies is increased by up to 682.8% with the centrifugal softening effect. Furthermore, an experimentally validated analytical model is deduced to compare the performances of centrifugal softening and stiffening harvesters, which has been an open issue before. Finally, a broadband centrifugal softening beam array is proposed for low-frequency rotations. When this harvester is attached to the SSHI circuit, for ten identical piezoelectric beams, the bandwidth can be broadened by up to 1240.7% compared with that of a single beam.

This thesis provides novel rotational energy harvesters utilizing the nonlinearity and centrifugal effects to achieve the broad low-frequency bandwidth, and proposes their valuable numerical and analytical models for deep mechanism investigations and performance improvements.

Research Excellence Award 2020-21

Professor LU Yi-Chun (盧怡君)

Mechanical & Automation Engineering Department

Professor Lu received her B.S. Degree in Materials Science & Engineering from National Tsing Hua University in 2007 and Ph.D. degree in Materials Science & Engineering from the Massachusetts Institute of Technology in 2012. After her graduate study, she worked as a Postdoctoral Fellow in the Department of Chemistry at the Technische Universität München. She joined The Chinese University of Hong Kong (CUHK) in 2013 as an Assistant Professor and was promoted to Associate Professor in 2018.

Professor Lu is the founding member of the Young Academy of Science of Hong Kong, fellow of The Royal Society of Chemistry, and was the recipient of the Hong Kong SAR Research Grants Council Early Career Award in 2014, Young Researchers Award in 2016, University Education Award in 2016, United College Early Career Research Excellence Award in 2018 and Xplorer Prize in 2021. Her research interest centers on developing fundamental understandings and material design principles for clean energy storage and conversion. In particular, her research group focuses on electrode and electrolyte design for high-energy metal-air and metal-sulfur batteries; redox-active components and solution chemistry for redox-flow batteries; mechanistic understanding of interfacial phenomena governing electrochemical energy conversion and storage processes.

Professor Lu currently serves as an associate editor and board member for Journal of Materials Chemistry A (Royal Society of Chemistry), and editorial board member for Materials Today (Elsevier) and Scientific Reports (Nature Publishing Group).

Dean's List for MSc Students 2020-2021

The following MSc students who have graduated in 2020-2021 have achieved a cumulative GPA of 3.6 or above and are placed on the Dean's List:

CAI Yuheng (蔡宇恒)
Financial Technology

CHAN Moniz (陳月怡)
Biomedical Engineering

CHEN Guozheng (陳國鋒)
Information Engineering

CHEN Haozhao (陳浩釗)
Financial Technology

CHEN Jiamin (陳佳敏)
E-Commerce & Logistics Technologies

CHEN Jiaxian (陳佳嫻)
Information Engineering

CHEN Wei (陳瑋)
Mechanical & Automation Engineering

CHU Cheuk Ling Tiffany (朱卓玲)
Computer Science

CHU Sheung Man (朱尚文)
Biomedical Engineering

FANG Wei (方煒)
Information Engineering

FUNG Chung Kit (馮中傑)
Computer Science

GE Rouwen (葛柔文)
Information Engineering

GUO Xing (郭興)
Computer Science

HE Qiyang (何漆楊)
Electronic Engineering

HUANG Bingyuan (黃炳源)
Information Engineering

KUNG Wing Chun (龔穎俊)
Computer Science

LAM Hei Shun (林希信)
Mechanical & Automation Engineering

LAM Ka Kit (林家傑)
Financial Technology

LAM Wai Yi (林慧怡)
Mechanical & Automation Engineering

LEE Yuk Cheung (利旭祥)
Computer Science

LI Rui (李睿)
Mechanical & Automation Engineering

LI Yan (李岩)
Computer Science

LIANG Junjie (梁俊杰)
Computer Science

LIANG Linyan (梁琳燕)
Financial Technology

LIN Jiahui (林佳輝)
Computer Science

LIN Kuo (林闕)
Computer Science

LIN Pak Ki (連柏淇)
Computer Science

LING Yihu (凌意虎)
Mechanical & Automation Engineering

LIU Jiarong (劉嘉榮)

Computer Science

LIU Ruiwen (劉瑞文)

Mechanical & Automation Engineering

LIU Yicheng (劉毅成)

Information Engineering

LU Ziwen (盧梓文)

Information Engineering

OOI Hon Son

Biomedical Engineering

QIU Xue (邱雪)

Financial Technology

REN Yubin (任毓彬)

Computer Science

SHEN Ruohong (沈若鴻)

Mechanical & Automation Engineering

SHI Yan (施琰)

Computer Science

SONG Yanting (宋燕婷)

Computer Science

SUN Pengliang (孫鵬亮)

Computer Science

TANG Min (唐敏)

Electronic Engineering

WANG Bohao (王博浩)

Information Engineering

XING Jinbo (邢金波)

Computer Science

YANG Jichun (楊季淳)

Mechanical & Automation Engineering

YANG Zekun (楊澤坤)

Computer Science

YU Sixing (余思醒)

Financial Technology

ZENG Fanyuan (曾繁源)

Information Engineering

ZHANG Hanyu (張晗宇)

Computer Science

ZHANG Hongji (張鴻基)

Biomedical Engineering

ZHANG Nan (張楠)

Information Engineering

ZHANG Ni (張霓)

Computer Science

ZHANG Ruikang (張瑞康)

Information Engineering

ZHANG Yaling (張雅翎)

Information Engineering

ZHAO Benyun (趙犇贇)

Mechanical & Automation Engineering

ZHAO Haodong (趙浩東)

Computer Science

ZHONG Dean (鍾德桉)

E-Commerce & Logistics Technologies

ZHOU Wei (周瑋)

Computer Science

ZHU Shengtong (朱盛通)

Information Engineering

ZHU Yifan (朱奕帆)

Information Engineering

ZHU Zhihao (祝志豪)

Computer Science

Dean's List for Undergraduate Students 2020-2021

The undergraduate students below have achieved a GPA of 3.5 or above in 2020-2021 academic year and are placed on the Dean's List:

ANZELA Della (陳曉玲)
Systems Engineering & Engineering
Management

AU Tsz Him Vincent (區梓謙)
Mechanical & Automation Engineering

BAEKOVA Aiana
Biomedical Engineering

BAEKOVA Alina
Mechanical & Automation Engineering

CAI Longhua (蔡龍華)
Information Engineering

CAO Meng (曹勁)
Computer Science

CHAN Chi Chung (陳智聰)
Systems Engineering & Engineering
Management

CHAN Chun Wai (陳振偉)
Information Engineering

CHAN Edwin (陳彥維)
Financial Technology

CHAN Ho Yeung (陳皓揚)
Engineering

CHAN Long Huen (陳朗煊)
Computer Science

CHAN Sum Yiu (陳琛瑤)
Systems Engineering & Engineering
Management

CHAN Sum Yuet (陳心悅)
Information Engineering

CHAN Tsz Hei (陳子曦)
Systems Engineering & Engineering
Management

CHAN Wai Chi (陳緯慈)
Computer Science

CHAN Wai Lam (陳韋霖)
Information Engineering

CHAN Wai Tak (陳偉德)
Information Engineering

CHAN Wing Kit (陳榮傑)
Artificial Intelligence: Systems and
Technologies

CHANG Chirui (常馳睿)
Computer Science

CHAO Yu (趙佑)
Computer Science

CHAU Ka Ki (周嘉琪)
Computer Science

CHEN Daoyuan (陳道遠)
Mathematics & Information Engineering

CHEN Haonan (陳浩楠)
Computer Science

CHEN Sijin (陳思錦)
Computer Science

CHEN Tianhao (陳天浩)
Computer Science

CHEN Weiyu (陳瑋鈺)
Computer Science

CHEN Yiwei (陳壹煒)
Energy & Environmental Engineering

CHEN Yu (陳鈺)
Financial Technology

CHENG Chak Kit (鄭澤傑)
Biomedical Engineering

CHENG Si Jia (程思佳)
Engineering

CHENG Tsz Ying (鄭芷盈)
Artificial Intelligence: Systems and
Technologies

CHENG Xiwei (程壘璋)
Computer Science

CHEUNG Yu Shing (鄭裕誠)
Engineering

CHEUNG Bok Man Oscar (張博文)
Computer Science

CHEUNG Chi Wang (張智宏)
Artificial Intelligence: Systems and
Technologies

CHEUNG Hin Chung (張衍宗)
Energy & Environmental Engineering

CHEUNG Lok Yee Joey (張樂怡)
Financial Technology

CHEUNG Man Pan (張文斌)
Information Engineering

CHEUNG Pui Kin (張倍堅)
Information Engineering

CHIN Zuo Yi (陳祖儀)
Systems Engineering & Engineering
Management

CHIU Long Him (趙朗謙)
Artificial Intelligence: Systems and
Technologies

CHOI Ching Lam (蔡青琳)
Electronic Engineering

CHOI Jeongho (崔正鎬)
Mechanical & Automation Engineering

CHOW Kwan Ting Jeremy (周君琿)
Computer Science

CHOW Pak Ho (周柏浩)
Information Engineering

CHOW Sing Tak (鄒承德)
Mechanical & Automation Engineering

CHU Chun To (朱俊滔)
Computer Science

CHUNG Ho Lun (鍾皓麟)
Mechanical & Automation Engineering

CHUNG Ka Chun (鍾嘉俊)
Engineering

CHUNG Ka Ho Ryan (鍾嘉浩)
Computer Science

CHUNG Tsz Ting (鍾芷婷)
Computer Science

CUI Chenfei (崔辰菲)
Electronic Engineering

CUI Yicheng (崔益誠)
Engineering

DAI Zijie (戴子傑)
Computer Science

DENG Haopeng (鄧浩鵬)
Computer Science

DENG Piao (鄧朴)
Electronic Engineering

DING Baizeng (丁百增)
Computer Science

FANG Ziheng (房子橫)
Engineering

GAO Feiyu (高飛宇)
Engineering

GARG Shiven
Mechanical & Automation Engineering

GENG Leijun (耿雷鈞)
Financial Technology

GOYAL Shreyas
Computer Engineering

GUAN Xiuqi (管修齊)
Engineering

GUAN Yunrui (關雲瑞)
Mathematics & Information Engineering

GUO Hansheng (郭漢晟)
Mathematics & Information Engineering

HE Donglong (何東龍)
Computer Science

**HEGAZY Mahmoud Ahmed
Mahmoud Mohamed M.**
Mathematics & Information Engineering

HEIBA Serageldin Amre Abdelaziz
Energy & Environmental Engineering

HO Ka Chun (賀嘉俊)
Energy & Environmental Engineering

HO Kwan Hei Jude (何君禧)
Biomedical Engineering

HO Tsz Ngong (何子昂)
Information Engineering

HONG Kai Yin (康啟然)
Computer Science

HONG Mingxuan (洪明軒)
*Artificial Intelligence: Systems and
Technologies*

HU Han (胡瀚)
Information Engineering

HU Zihao (胡子濠)
Information Engineering

HUANG Jingdong (黃京東)
Information Engineering

HUANG Kaining (黃楷凝)
Computer Science

HUANG Sida (黃思達)
Financial Technology

HUANG Yanwen (黃彥聞)
Engineering

HUANG Yizhan (黃一展)
Computer Science

HUI Yik Man (許譯文)
Biomedical Engineering

HUNG Man Kei (洪銀淇)
Information Engineering

IP Wing Yan (葉穎茵)
Financial Technology

IQBAL Wasi
Biomedical Engineering

JI Yi (計懿)
Computer Science

JIANG Hongxu (姜虹旭)
Financial Technology

JIANG Yilei (姜一番)
Computer Science

JUNG Jaeyoon
Biomedical Engineering

KEI Yat Long (紀逸朗)
Financial Technology

KHAN Md Mashiath Muhtasim
Biomedical Engineering

KIM Jounghoon (金鍾勳)
Computer Science

KIM Keunyoung (金根永)
Mechanical & Automation Engineering

KITHANIA Archit (高亞哲)
Computer Science

KITTIVORAPAT Pran
*Artificial Intelligence: Systems and
Technologies*

KO Wang Steven (高泓)
Information Engineering

KOVALENKO Pavel
Information Engineering

KUAN Chit Yau (官哲佑)
Biomedical Engineering

KWOK Tsun On (郭峻安)
Engineering

KWON Seontaek
Energy & Environmental Engineering

LAM Kin Ho (林健豪)
Engineering

LAM Kin Long (林健朗)
Computer Science

LAM Man Ho (林文昊)
Engineering

LAU Kwun Hang (劉冠亨)
Engineering

LAU Yee Shun (劉以信)
Biomedical Engineering

LEE Apollo (李昊)
Electronic Engineering

LEE Kin Hei (李健禧)

Artificial Intelligence: Systems and Technologies

LEE Kwan Hung (李鈞紘)

Computer Science

LEE Tak Him (李德謙)

Engineering

LEI Haoyu (雷浩瑀)

Mathematics & Information Engineering

LEONARDI Joveta Florencia

Financial Technology

LEUNG Cheuk Yin (梁卓然)

Biomedical Engineering

LEUNG Chi Hang Hans (梁孜恒)

Mechanical & Automation Engineering

LEUNG Ho Man (梁浩文)

Electronic Engineering

LEUNG Kwok Po (梁國坡)

Mechanical & Automation Engineering

LEUNG Wang Fat (梁泓發)

Computer Science

LEUNG Yan Yi (梁恩兒)

Information Engineering

LEUNG Yuk Hei Boris (梁旭希)

Engineering

LI Eric John (李銘勛)

Engineering

LI Hangji (李航吉)

Computer Science

LI Jianqiang (李建強)

Engineering

LI Kam Po (李錦波)

Computer Science

LI Qi (李琪)

Computer Science

LI Runkun (李潤坤)

Electronic Engineering

LI Ruxuan (李如軒)

Computer Science

LI Sijie (黎思杰)

Mathematics & Information Engineering

LI Wai Yip (李煒業)

Computer Science

LI Yixin (李一鑫)

Computer Science

LI Yunxiang (李雲想)

Computer Science

LI Zaitang (李再唐)

Mathematics & Information Engineering

LIMAS Philip Tarrantino (林俊成)

Electronic Engineering

LIN Yi Ting (林奕廷)

Biomedical Engineering

LIN Zhi Yuan (林志遠)

Computer Science

LIOU King Long (劉璟朗)

Financial Technology

LIU Haitong (劉海童)

Artificial Intelligence: Systems and Technologies

LIU Haoyu (劉昊宇)

Computer Science

LIU Man Kai (劉汶楷)

Computer Science

LIU Tianyi (劉天逸)

Financial Technology

LIU Yi (柳益)

Mathematics & Information Engineering

LIU Yuxin (劉煜新)

Computer Science

LIU Zhaoyu (劉墨毓)

Biomedical Engineering

LIU Zhenyuan (劉圳遠)

Computer Science

LIU Ziqi (劉子齊)

Financial Technology

LO Long Ting (羅朗霆)

Information Engineering

LO Teeradej

Engineering

LO Wing Fung (盧永峰)

Artificial Intelligence: Systems and Technologies

LO Yue Lung Edison (盧御龍)

Biomedical Engineering

LU Chunlei (陸春磊)

Information Engineering

LUI Ming Hong (呂銘康)

Electronic Engineering

MAK Chin Yung (麥千融)

Computer Science

MAK Hei Yi (麥希爾)

Computer Science

MAN Cheuk Ying Tiffany (文卓盈)

Mechanical & Automation Engineering

MAO Yifan (毛一帆)

Systems Engineering & Engineering Management

NAM Keon Wook

Electronic Engineering

NG Hiu Tsun (吳曉峻)

Computer Science

NG Hoi Leong (吳海亮)

Computer Science

NG Kenny Cheuk Yi (吳卓怡)

Mechanical & Automation Engineering

NG Man Tik (吳文迪)

Engineering

NG Siu Man (吳小文)

Artificial Intelligence: Systems and Technologies

NG Tim Ying (伍恬瑩)

Information Engineering

NG Wai Hin (吳偉軒)

Energy & Environmental Engineering

NG Yau Fu (吳有孚)

Engineering

NGAI Chi Hang (倪智恆)
Biomedical Engineering

NGUYEN Hoang Son
Artificial Intelligence: Systems and Technologies

PANG Ho Hin (彭皓軒)
Financial Technology

PENG Weirui (彭偉睿)
Electronic Engineering

PERERA Pathirage Dineth Banura
Computer Science

PHAN Nguyen Khoi
Systems Engineering & Engineering Management

PO Wai Yin (布偉言)
Information Engineering

PRACHASEREE Chaiyasait (李梓銘)
Computer Science

QIU Yizhang (邱益彰)
Artificial Intelligence: Systems and Technologies

RAO Arjun Ashok
Financial Technology

SAENG-NGERN Maneemala
Engineering

SALEH Alessandro Figo
Computer Science

SANGSIRI Nawapon
Engineering

SARKER Md Fahid
Engineering

SEN Yan Ho (孫恩浩)
Artificial Intelligence: Systems and Technologies

SHAN Yuzhen (單于楨)
Computer Science

SHEK Tsz Him (石梓謙)
Artificial Intelligence: Systems and Technologies

SHEN Junbo (沈浚波)
Engineering

SHI Juluan (施鉅鑾)
Financial Technology

SHI Zhuoya (施卓雅)
Mathematics & Information Engineering

SIN Ho Ting (單浩庭)
Energy & Environmental Engineering

SIN Kai Chun (洗啟俊)
Engineering

SO Cheuk Yin (蘇焯彥)
Financial Technology

SO Chi Fung (蘇智豐)
Computer Science

SU Hongjin (蘇弘錦)
Computer Science

SU Runlong (蘇潤龍)
Artificial Intelligence: Systems and Technologies

SUN Leyuan (孫樂源)
Artificial Intelligence: Systems and Technologies

SUN Yizhou (孫逸舟)
Engineering

TAM Rocky Lok Ki (譚洛棋)
Engineering

TANG Yuen Wa (鄧琬樺)
Information Engineering

TIE Tianmeng (鐵天蒙)
Financial Technology

TRAN Thi Trang
Biomedical Engineering

TSE Hon Tik (謝瀚迪)
Computer Science

TSE Ka Hei (謝家熙)
Engineering

TSE Tsz Ting (謝梓廷)
Artificial Intelligence: Systems and Technologies

VARSHNEY Aditya
Computer Science

WAI Ka Hei (衛家熙)
Engineering

WAN Yuxuan (萬宇軒)
Artificial Intelligence: Systems and Technologies

WANG Bokai (王柏凱)
Mathematics & Information Engineering

WANG Han Yi (王涵儀)
Biomedical Engineering

WANG Jiuming (王久銘)
Artificial Intelligence: Systems and Technologies

WANG Liu Jianfu (王劉劍夫)
Artificial Intelligence: Systems and Technologies

WANG Peiyao (王佩瑤)
Computer Science

WANG Tianchang (王天暢)
Computer Science

WANG Wenhao (王文灝)
Mechanical & Automation Engineering

WANG Yixiao (王藝曉)
Mathematics & Information Engineering

WIJAYA Leonardo Nicholas Adi
Biomedical Engineering

WISELY-NATALIA
Systems Engineering & Engineering Management

WONG Chi Kwan Cyrus (黃志鈞)
Engineering

WONG Hin (王軒)
Computer Science

WONG Hin Ching (黃衍情)
Biomedical Engineering

WONG Pak Hung (黃鉞雄)
Information Engineering

WONG Sai Ho (黃世豪)
Computer Science

WONG Tsz Chun (黃梓駿)
Computer Science

WONG Tsz Hin (黃子軒)
Engineering

WONG Wan Ki (黃允祈)
Mathematics & Information Engineering

WONG Yik Chun (黃亦駿)
Computer Science

WONG Ying Hei (黃盈禧)
Financial Technology

WONG Yu Wai (黃裕煒)
Information Engineering

WONGKHAM Chaichon
Computer Science

WOO Pui Yung Anna (鄒佩蓉)
Mathematics & Information Engineering

WU Yushan (吳宇珊)
Artificial Intelligence: Systems and Technologies

XIAO Can (肖璨)
Energy & Environmental Engineering

XIE Junjie (謝俊杰)
Computer Science

XU Jing (許靖)
Financial Technology

XU Lu (徐璐)
Computer Science

XU Xiang (徐翔)
Financial Technology

YANG Haochen (楊浚辰)
Mathematics & Information Engineering

YANG Yiliu (楊譯琬)
Artificial Intelligence: Systems and Technologies

YAO Shihurong (姚實胡榕)
Engineering

YEUNG Ngan Sum (楊岸深)
Computer Science

YEUNG Siu Chun (楊紹俊)
Financial Technology

YING Chun Wai (邢秦璋)
Engineering

YIP Tin Yui (葉天睿)
Artificial Intelligence: Systems and Technologies

YU Letian (余樂滂)
Financial Technology

YU Sun Leung (余新亮)
Electronic Engineering

YU Tingyang (于挺洋)
Mathematics & Information Engineering

YU Xihang (余錫行)
Artificial Intelligence: Systems and Technologies

YU Yue (俞越)
Computer Science

YUEN Chi Ching (袁志澄)
Artificial Intelligence: Systems and Technologies

YUEN Lok Kan Ethen (袁樂勤)
Engineering

ZENG Meiqi (曾美琪)
Financial Technology

ZHANG Jingze (張競澤)
Computer Science

ZHANG Junqi (張峻齊)
Systems Engineering & Engineering Management

ZHANG Shenghao (張勝皓)
Computer Science

ZHANG Wenxuan (張汶瑄)
Computer Science

ZHANG Xiran (張晰然)
Financial Technology

ZHANG Xue (張雪)
Engineering

ZHANG Yi (章詣)
Mathematics & Information Engineering

ZHANG Zhexiang (張哲翔)
Engineering

ZHAO Jinpei (趙金培)
Mathematics & Information Engineering

ZHENG Weijia (鄭惟嘉)
Mathematics & Information Engineering

ZHOU Junda (周君達)
Mathematics & Information Engineering

ZHOU Mingjun (周明峻)
Mathematics & Information Engineering

ZHOU Yixiang (周逸祥)
Engineering

ZHOU Zebo (周則伯)
Artificial Intelligence: Systems and Technologies

Commendations 2021

The following faculty members and students of the faculty have received well deserved commendations, awards and prizes:

- **Mr. LOU Kuan Wen (駱冠文) and Miss OH Jiwon (吳知遠)**
of Biomedical Engineering Department
together with the members of other universities
Who received Social Ambassador IP Award in Hong Kong Social Enterprise Competition 2020 in April 2021
- **Dr. PAN Tianle Flippy (潘天樂)**
of Biomedical Engineering Department
together Mr. LI Yehui (李葉輝) and Mr. XIN Wenci (李文辭) of Surgery Department
Who won the Champion & Special Award (Postgraduate Group) in Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- **Dr. RAHMAN Md Habibur**
of Biomedical Engineering Department
Who won the Champion (Postgraduate Individual) in Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- **Dr. YUAN Wei Hao (苑偉豪) and Mr. LAI Chun Him Nathanael (勵晉謙) and Mr. TUNG Lok Him (董諾謙)**
of Biomedical Engineering Department
together with Mr. YAO Zhi (姚執), Mr. XU ShunXiang (許順祥) and Miss GUO Jia Xin (郭佳欣) of Orthopaedics & Traumatology Department
Who won the Postgraduate Group Second Runner-up in Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- **Miss LAU Fong Yung Yolanda (劉晃蓉) and Miss CHIU Yee Ting (趙綺婷)**
of Biomedical Engineering Department
Who received the Merit Award (Innovation Category: Life Sciences) in the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in June 2021
- **Mr. MAK Kin Shing Wickey (麥健成) and Mr. YIP Man Shun (葉文順)**
of Biomedical Engineering Department
together with their teammates from Hong Kong Adventist College
Who received the Merit Award (Innovation Category: Life Sciences) in the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in June 2021
- **Miss NG Wing Fai Sofie (吳詠輝)**
of Biomedical Engineering Department
Who received the Third Prize (Innovation Category: Life Sciences) in the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in June 2021
- **Dr. YUAN Wei Hao (苑偉豪) and Mr. LAI Chun Him Nathanael (勵晉謙) and Mr. TUNG Lok Him (董諾謙)**
of Biomedical Engineering Department
together with Mr. YAO Zhi (姚執), Mr. XU ShunXiang (許順祥) and Miss GUO Jia Xin (郭佳欣) of Orthopaedics & Traumatology Department
Who won the Second Prize (Innovation Category: Life Sciences) in the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in June 2021
- **Miss XU Ching Fai (許清暉)**
of Biomedical Engineering Department
together with her teammates from other departments of CUHK
Who received the Awards of Merits in Hong Kong Blockchain Olympiad 2021 in June 2021
- **Mr. CHAN Wing Huen (陳穎煊) and Miss LAU Telly (劉嘉潼) and Miss NG Wing Fai Sofie (吳詠輝) and Miss LI Tsz Ching Sharon (李芷呈) and Miss YU Ching Yi Amber (余澂宜)**
of Biomedical Engineering Department
Who won 具開發潛力設計獎(大專組) at 第二屆生物醫學工程創意競賽之「愛·創耆樂」 in July 2021
- **Dr. XU Xiayi (徐夏憶)**
of Biomedical Engineering Department
Who received the CUHK Young Scholars Thesis Award 2020 in July 2021
- **Miss SIU Man Hei (蕭雯禧)**
of Biomedical Engineering Department
Who won the Best Project Award 2021 in Undergraduate Research Summer Internship Programme in September 2021
- **Miss TRAN Thi Trang**
of Biomedical Engineering Department
Who won the Best Project Award 2021 in Undergraduate Research Summer Internship Programme in September 2021
- **Miss WONG Cheuk Yiu (黃卓瑤)**
of Biomedical Engineering Department
Who won the Best Project Award 2021 in Undergraduate Research Summer Internship Programme in September 2021
- **Professor TONG Kai Yu Raymond (湯啟宇)**
of Biomedical Engineering Department
together with his research team
Who received the Smart Living (Smart Healthcare) Award - Certificate of Merit in Hong Kong ICT Awards 2021 in November 2021
- **Professor TONG Kai Yu Raymond (湯啟宇)**
of Biomedical Engineering Department
together with his research team (Hope4Care Team)
Who won the Winner of Best Rehabilitation Programme in the 9th Asia Pacific Eldercare Innovation Awards 2021 in December 2021
- **Professor TONG Kai Yu Raymond (湯啟宇)**
of Biomedical Engineering Department
Who received the Award of Ageing Asia Global Ageing Influencers 2021 in the 9th Asia Pacific Eldercare Innovation Awards 2021 in December 2021
- **Professor TAO Yufei (陶宇飛)**
of Computer Science & Engineering Department
Who was elected ACM Fellow 2020 in January 2021
- **Mr. LI Wei (李巍)**
of Computer Science & Engineering Department
Who won the Best Paper Award from Asia and South Pacific Design Automation Conference (ASPDAC) 2021 in January 2021

- **Mr. MA Yuzhe (馬宇哲)**
of Computer Science & Engineering Department
Who won the Best Paper Award from Asia and South Pacific Design Automation Conference (ASPDAC) 2021 in January 2021
- **Mr. QU Yuxiao (渠鈺瀟)**
of Computer Science & Engineering Department
Who won the Best Paper Award from Asia and South Pacific Design Automation Conference (ASPDAC) 2021 in January 2021
- **Professor YU Bei (余備)**
of Computer Science & Engineering Department
Who won the Best Paper Award from Asia and South Pacific Design Automation Conference (ASPDAC) 2021 in January 2021
- **Mr. LIN Shiju (林仕居)**
of Computer Science & Engineering Department
Who won the Second Place in the 2021 ISPD Contest on Wafer-Scale Physics Modelling in March 2021
- **Mr. LIU Jinwei (劉晉煒)**
of Computer Science & Engineering Department
Who won the Second Place in the 2021 ISPD Contest on Wafer-Scale Physics Modelling in March 2021
- **Mr. LU Baotong (路保同)**
of Computer Science & Engineering Department
Who received the 2021 ACM SIGMOD Research Highlight Award in March 2021
- **Professor WONG D.F. Martin (黃定發)**
of Computer Science & Engineering Department
Who won the Second Place in the 2021 ISPD Contest on Wafer-Scale Physics Modelling in March 2021
- **Professor YOUNG Fung Yu (楊鳳如)**
of Computer Science & Engineering Department
Who won the Second Place in the 2021 ISPD Contest on Wafer-Scale Physics Modelling in March 2021
- **Mr. ZANG Xinshi (臧新實)**
of Computer Science & Engineering Department
Who won the Second Place in the 2021 ISPD Contest on Wafer-Scale Physics Modelling in March 2021
- **Mr. ZHANG Xiaopeng (張曉鵬)**
of Computer Science & Engineering Department
Who won the Second Place in the 2021 ISPD Contest on Wafer-Scale Physics Modelling in March 2021
- **Professor CHENG James (鄭尚策)**
of Computer Science & Engineering Department
Who was recognized by inclusion in AI 2000 Most Influential Scholar Annual List - Database in May 2021
- **Professor FU Wai Chee Ada (傅慰慈)**
of Computer Science & Engineering Department
Who was recognized by inclusion in AI 2000 Most Influential Scholar Annual List - Database in May 2021
- **Mr. GAO Yifan (高一帆)**
of Computer Science & Engineering Department
Who was selected as Top 100 Chinese New Stars in Artificial Intelligence by Baidu Scholar in May 2021
- **Professor JIA Jiaya (賈佳亞)**
of Computer Science & Engineering Department
Who was recognized by inclusion in AI 2000 Most Influential Scholar Annual List - Computer Graphics, and Computer Vision in May 2021
- **Professor KING Kuo Chin Irwin (金國慶)**
of Computer Science & Engineering Department
Who was recognized by inclusion in AI 2000 Most Influential Scholar Annual List - AAAI/IJCAI, Information Retrieval and Recommendation, and Data Mining in May 2021
- **Professor LYU Rung Tsong Michael (呂榮聰)**
of Computer Science & Engineering Department
Who was recognized by inclusion in AI 2000 Most Influential Scholar Annual List - AAAI/IJCAI, Information Retrieval and Recommendation, and Data Mining in May 2021
- **Professor TAO Yufei (陶宇飛)**
of Computer Science & Engineering Department
Who was recognized by inclusion in AI 2000 Most Influential Scholar Annual List - Database in May 2021
- **Professor XU Hong (徐宏)**
of Computer Science & Engineering Department
Who received the Distinguished TPC Member from IEEE INFOCOM 2021 in May 2021
- **Professor DOU Qi (竇琪)**
of Computer Science & Engineering Department
Who won the IEEE ICRA 2021 Best Paper Award in Medical Robotics in June 2021
- **Professor HENG Pheng Ann (王平安)**
of Computer Science & Engineering Department
Who won the IEEE ICRA 2021 Best Paper Award in Medical Robotics in June 2021
- **Mr. HOU Yifan (侯逸帆)**
of Computer Science & Engineering Department
Who won the Faculty Outstanding MPhil Thesis Award 2020 in June 2021
- **Mr. JIN Yueming (金玥明)**
of Computer Science & Engineering Department
Who won the IEEE ICRA 2021 Best Paper Award in Medical Robotics in June 2021
- **Mr. LAI Ziliang (賴子良)**
of Computer Science & Engineering Department
Who won the ACM SIGMOD 2021 Student Research Competition in June 2021
- **Mr. LONG Yonghao (龍永灝)**
of Computer Science & Engineering Department
Who won the IEEE ICRA 2021 Best Paper Award in Medical Robotics in June 2021
- **Professor YAO Chi Chih Andrew (姚期智)**
of Computer Science & Engineering Department
Who was selected as 2021 Kyoto Prize Laureate in June 2021
- **Professor LEE Pak Ching Patrick (李柏晴)**
of Computer Science & Engineering Department
Who won the Young Researcher Award 2020 of The Chinese University of Hong Kong in July 2021
- **Professor WAH Wan Sang Benjamin, JP (華雲生)**
of Computer Science & Engineering Department
Who received the Bronze Bauhinia Star (BBS) by the Hong Kong Government in July 2021
- **Professor FU Chi Wing (傅志榮)**
of Computer Science & Engineering Department
Who received the ICCV 2021 Outstanding Reviewer Award in October 2021

- **Mr. BAI Chen (白晨)**
of Computer Science & Engineering Department
Who won the Best Paper Award from International Conference on Computer-Aided Design (ICCAD) 2021 in November 2021
- **Mr. MA Yuzhe (馬宇哲)**
of Computer Science & Engineering Department
Who won the Best Paper Award from International Conference on Computer-Aided Design (ICCAD) 2021 in November 2021
- **Mr. LIN Shiju (林仕居)**
of Computer Science & Engineering Department
Who won the First Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "GPU-Accelerated Logic Rewriting" in November 2021
- **Mr. LIU Jinwei (劉晉煒)**
of Computer Science & Engineering Department
Who won the First Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "GPU-Accelerated Logic Rewriting" in November 2021
- **Mr. LIU Jinwei (劉晉煒)**
of Computer Science & Engineering Department
Who won the Second Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "Routing with Cell Movement Advanced" in November 2021
- **Mr. LIU Tianji (劉天驥)**
of Computer Science & Engineering Department
Who won the First Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "GPU-Accelerated Logic Rewriting" in November 2021
- **Mr. SUN Qi (孫奇)**
of Computer Science & Engineering Department
Who won the Best Paper Award from International Conference on Computer-Aided Design (ICCAD) 2021 in November 2021
- **Mr. SUN Qi (孫奇)**
of Computer Science & Engineering Department
Who won the Third Place in Student Research Competition of International Conference on Computer-Aided Design (ICCAD) 2021 in November 2021
- **Mr. SUN Pengliang (孫鵬亮)**
of Computer Science & Engineering Department
Who won the Third Place at ROD2021 Challenge at ACM International Conference on Multimedia Retrieval 2021 in November 2021
- **Professor WONG D. F. Martin (黃定發)**
of Computer Science & Engineering Department
Who won the Best Paper Award from International Conference on Computer-Aided Design (ICCAD) 2021 in November 2021
- **Professor WONG D.F. Martin (黃定發)**
of Computer Science & Engineering Department
Who won the Second Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "Routing with Cell Movement Advanced" in November 2021
- **Mr. WANG Fangzhou (汪方舟)**
of Computer Science & Engineering Department
Who won the Second Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "Routing with Cell Movement Advanced" in November 2021
- **Professor YOUNG Fung Yu (楊鳳如)**
of Computer Science & Engineering Department
Who won the First Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "GPU-Accelerated Logic Rewriting" in November 2021
- **Professor YOUNG Fung Yu (楊鳳如)**
of Computer Science & Engineering Department
Who won the Second Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "Routing with Cell Movement Advanced" in November 2021
- **Professor YU Bei (余備)**
of Computer Science & Engineering Department
Who won the Best Paper Award from International Conference on Computer-Aided Design (ICCAD) 2021 in November 2021
- **Mr. ZANG Xinshi (臧新實)**
of Computer Science & Engineering Department
Who won the Second Place in 2021 CAD Contest at International Conference on Computer-Aided Design (ICCAD) for the topic of "Routing with Cell Movement Advanced" in November 2021
- **Professor ZHAO Ni (趙銳)**
of Electronic Engineering Department
Who was awarded the Outstanding Fellow of the Faculty of Engineering in August 2021
- **Professor LOH Poh Chiang Andrew (盧保聰)**
of Electronic Engineering Department
Who was named as the Highly Cited Researchers 2021 by Clarivate Analytics in November 2021
- **Professor SHU Ching Tat Chester (許正德)**
of Electronic Engineering Department
Who was elected as Optica Fellow 2022 (formerly OSA) in November 2021
- **Ms. YU Yue (俞越)**
of Electronic Engineering Department
Who won the First Runner-up in the Best Paper Award of the 21st IEEE Photonics Society (Hong Kong Chapter) Postgraduate Conference 2021 in December 2021
- **Dr. HO Marco (何震宇)**
of Information Engineering Department
Who was awarded the University Education Award (Early Career Faculty Members) for 2020-21 in May 2021
- **Dr. HO Marco (何震宇)**
of Information Engineering Department
Who received the Vice-Chancellor's Exemplary Teaching Award 2020 in May 2021
- **Mr. SHI Shuyao (石書堯)**
of Information Engineering Department
Who won the Best Student Paper Award at IoTDI 2021 in May 2021
- **Mr. SHUAI Xian (帥先)**
of Information Engineering Department
Who won the Best Student Paper Award at IoTDI 2021 in May 2021
- **Professor XING Guoliang (邢國亮)**
of Information Engineering Department
Who won the Best Student Paper Award at IoTDI 2021 in May 2021
- **Miss NG Tim Ying (伍恬瑩)**
of Information Engineering Department
Who won the Third Prize in the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in June 2021

- **Miss TSE Man Yan (謝文昕)**
of Information Engineering Department
Who won the Third Prize in the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in June 2021
- **Professor ZHAO Changhong (趙常宏)**
of Information Engineering Department
Who received the IEEE Power and Energy Society (PES) Prize Paper Award & Best Papers of IEEE Transactions on Power Systems (TPWRS) 2021 in July 2021
- **Miss CHAN Yin Hei Nicole (陳彥希)**
of Information Engineering Department
Who won the Final Year Project Awards 2020-21 in August 2021
- **Mr. CHEUNG Pui Kin (張倍堅)**
of Information Engineering Department
Who won the Final Year Project Awards 2020-21 in August 2021
- **Mr. HU Zihao (胡子濠)**
of Information Engineering Department
Who won the Charles Kao Top Performance Awards 2020-21 in August 2021
- **Mr. HUANG Jingdong (黃京東)**
of Information Engineering Department
Who won the Final Year Project Awards 2020-21 in August 2021
- **Miss NG Tim Ying (伍恬瑩)**
of Information Engineering Department
Who won the Final Year Project Awards 2020-21 in August 2021
- **Miss TSE Man Yan (謝文昕)**
of Information Engineering Department
Who won the Final Year Project Awards 2020-21 in August 2021
- **Mr. WONG Yu Wai (黃裕煒)**
of Information Engineering Department
Who won the Final Year Project Awards 2020-21 in August 2021
- **Mr. ZHOU Mingjun (周明峻)**
of Information Engineering Department
Who won the Charles Kao Top Performance Awards 2020-21 in August 2021
- **Professor CHAN Yuen Yan Rosanna (陳苑茵)**
of Information Engineering Department
Who was awarded the IEEE William E. Sayle II Award for Achievement in Education in 2021 in December 2021
- **Professor ROJAS Juan**
of Mechanical & Automation Engineering Department together with Mr. HAYAMI Yusuke of Osaka University in Japan
Who was shortlisted as the IEEE/SICE Int'l Symposium on System Integration Best Paper Award Finalist in January 2021
- **Professor ZHANG Li (張立)**
of Mechanical & Automation Engineering Department
Who was reappointed as the IEEE Nanotechnology Council (IEEE NTC) Distinguished Lecturer for 2021 in January 2021
- **Professor ZI Yunlong (訾雲龍)**
of Mechanical & Automation Engineering Department
Who was appointed as the Vebleo Fellow in January 2021
- **Mr. CHENG Mau Lim (鄭茂廉) and Mr. WONG Ka Tik (黃嘉迪) and Mr. WONG Man Hin (黃文軒) and Professor XU Dongyan (徐東艷) and Dr. LI Yiyang (李奕陽) and Mr. LEUNG Yun Yee Martin (梁潤怡) and Mr. YU Siu Ning (余紹寧)**
of Mechanical & Automation Engineering Department
Who received the 2nd Runner-up Award in the 9th Greater China Design Competition in March 2021
- **Mr. HEIBA Serageldin Amre Abdelaziz**
of Mechanical & Automation Engineering Department
Who received the Gold Award of the General Education Best Essay Award of 2019-2020, CUHK – In Dialogue with Nature for the Essay "Man, Nature, and COVID-19: The Origins and Resolutions of the Pandemic" in March 2021
- **Mr. JEON Min-gyu (全玟奎)**
of Mechanical & Automation Engineering Department
Who received the Bronze Award of the General Education Best Essay Award of 2018-2019 (CUHK) – In Dialogue with Humanity for the Essay "The Only Thing We Have to Fear is Fear Itself" in March 2021
- **Professor LIAO Wei Hsin (廖維新) and Dr. CAI Minjing (蔡明京) and Dr. WANG Jiahua (汪家華)**
of Mechanical & Automation Engineering Department
Who won the Gold Medal of the International Exhibition of Inventions of Geneva 2021 in March 2021
- **Professor LIAO Wei Hsin (廖維新) and Dr. GAO Fei (高飛) and Mr. LIU Gaoyu (劉高禹) and Mr. CHUNG Lik Hang Brendon (宗力恆) and Mr. CHAN Hung Tin Hugo (陳鴻天)**
of Mechanical & Automation Engineering Department
Who received the Silver Medal of the International Exhibition of Inventions of Geneva 2021 in March 2021
- **Professor REN Wei (任偉) and Dr. XU Ke (許可)**
of Mechanical & Automation Engineering Department
Who won the Gold Medal of the International Exhibition of Inventions of Geneva 2021 in March 2021
- **Miss SHEA Yi Yui (佘伊蕊) and Miss NG Hui Yin (吳栩妍) and Mr. CHOW Tsun Yu (周浚宇) and Mr. LIU Yuk Hei (廖鈺禧)**
of Mechanical & Automation Engineering Department together with Mr. TONG Tsz Hin (唐子軒), Mr. LEUNG Chung Him (梁頌謙) and Mr. KWOK Lam Him (郭霖謙) of Computer Science & Engineering Department
Who won the Champion in the Hong Kong Science Park "Human x Robot Basketball Competition" in March 2021

- Professor ZHANG Li (張立) and Dr. YANG Lindong (楊立冬) and Mr. LIU Wai Shing (廖偉成)**
of Mechanical & Automation Engineering Department together with Professor SUNG Joseph J. Y. (沈祖堯) of Institute of Digestive Disease, Dr. WONG Hei Sunny (黃曠) of Medicine and Therapeutics Department, Professor CHIU Wai Yan Philip (趙偉仁) of Surgery Department, Dr. CHAN Kai Fung (陳啟楓) of Chow Yuk Ho Technology Centre for Innovative Medicine, Professor IP Margaret (葉碧瑤) of Microbiology Department
 Who received the Bronze Medal of the International Exhibition of Inventions of Geneva 2021 in March 2021
- Miss FU Jingjing (付璟璟) and Professor ZI Yunlong (訾雲龍)**
of Mechanical & Automation Engineering Department
 Who received the Symposium Best Presentation Award in 2021 Virtual MRS Spring Meeting and Exhibit in April 2021
- Professor LU Yi-Chun (盧怡君)**
of Mechanical & Automation Engineering Department
 Who was elected as the Fellow of the Royal Society of Chemistry in April 2021
- Miss WANG Xingyu (王星雨) and Mr. WANG Wenhao (王文灝) and Miss KWOK Tien Wing (郭天穎) and Mr. CHEN Yiwei (陳壹煒) and Professor XU Dongyan (徐東艷) and Dr. LI Yiyang (李奕陽) and Mr. LEUNG Yun Yee Martin (梁潤怡) and Mr. YU Siu Ning (余紹寧)**
of Mechanical & Automation Engineering Department
 Who received the Second Prize Award in the "Intelligent +" Category: intelligent logistics handling, in the 2020 Guangdong-Hong Kong-Macao Undergraduate Engineering Training Integration Ability Competition in April 2021
- Mr. CHAN Hung Tin Hugo (陳鴻天) and Professor LIAO Wei Hsin (廖維新)**
of Mechanical & Automation Engineering Department
 Who received the Merit Award (Innovation Category) at the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- Professor KWOK Tsz Ho (郭子豪)**
of Mechanical & Automation Engineering Department
 Who received the 2021 SME Geoffrey Boothroyd Outstanding Young Manufacturing Engineer Award in May 2021
- Mr. LAM Chun Kit (林俊傑) and Professor CHENG Shing Shin**
of Mechanical & Automation Engineering Department
 Who received the Merit Award (Undergraduate Individual) at the Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- Miss LEUNG Chiu Man (梁昭敏) and Professor SONG Xu (宋旭)**
of Mechanical & Automation Engineering Department
 Who received the First Runner-up Award (Undergraduate Individual) at the Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- Mr. LI Pak Hin (李柏軒) and Professor WONG Hay (黃熙)**
of Mechanical & Automation Engineering Department
 Who received the Merit Award (Innovation Category) at the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- Mr. LIN Kwan Kit (連鈞傑) and Professor CHENG Shing Shin**
of Mechanical & Automation Engineering Department
 Who received the First Runner-up and Special Award (Undergraduate Individual) at the Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- Mr. LIU Kangcheng (劉康丞) and Professor CHEN Benmei (陳本美)**
of Mechanical & Automation Engineering Department
 Who received the Merit Award (Postgraduate Individual) at the Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- Mr. LIU Kangcheng (劉康丞) and Professor CHEN Benmei (陳本美)**
of Mechanical & Automation Engineering Department
 Who received the Third Prize (Innovation Category) at the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- Mr. LU Bo (陸波) and Professor LIU Yun Hui (劉雲輝)**
of Mechanical & Automation Engineering Department together with Mr. LONG Yonghao (龍永灝), Ms. JIN Yueming (金玥明), Professor DOU Qi (竇琪) and Professor HENG Pheng Ann (王平安) of Computer Science & Engineering Department and the members of other universities
 Who received the Best Paper Award in Medical Robotics in 2021 IEEE International Conference on Robotics and Automation in May 2021
- Mr. SIU Shi Pan (蕭士斌)**
of Mechanical & Automation Engineering Department together with Miss WONG Chi Ka (黃子嘉) of Medicine (MBChB) Programme, Miss LEE Tsz Yan (李芷欣) and Miss WONG Sin Yi (王倩儀) of Computer Science & Engineering Department
 Who received the Merit Award (Undergraduate Group) at the Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- Mr. SIU Shi Pan (蕭士斌) and Mr. NG Pui Hin (伍沛軒) and Professor LIU Yun Hui (劉雲輝)**
of Mechanical & Automation Engineering Department together with Miss LEE Tsz Yan (李芷欣) and Miss WONG Sin Yi (王倩儀) of Computer Science & Engineering Department, Miss CHEUNG So Yee (張素兒) of Physics Department, Miss WONG Chi Ka (黃子嘉) of Medicine (MBChB) Programme
 Who received the Third Prize (Innovation Category) at the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- Mr. SU Man Ngo Rocco (蘇文傲) and Mr. LAU Chun Kit (劉晉傑) and Miss MAN Cheuk Ying Tiffany (文卓盈) and Mr. AU Tsz Him Vincent (區梓謙) and Professor LAU Tat Ming Darwin (劉達銘)**
of Mechanical & Automation Engineering Department
 Who received the Third Prize (Innovation Category) at the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- Mr. WANG Yan (王岩) and Mr. LIN Hongbin (林洪斌) and Mr. WANG Xuchen (王頊琛) and Professor AU Kwok Wai Samuel (歐國威)**
of Mechanical & Automation Engineering Department
 Who received the First Runner-up (Postgraduate Group) at the Professor Charles K. Kao Student Creativity Awards 2021 in May 2021

- **Mr. WANG Yan (王岩) and Mr. LIN Hongbin (林洪斌) and Mr. WANG Xuchen (王頊琛) and Professor AU Kwok Wai Samuel (歐國威)**
of Mechanical & Automation Engineering Department
Who received the First Prize (Innovation Category) at the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- **Mr. YAN Wanquan (嚴萬泉) and Professor CHENG Shing Shin**
of Mechanical & Automation Engineering Department
Who received the Merit Award (Postgraduate Individual) at the Professor Charles K. Kao Student Creativity Awards 2021 in May 2021
- **Mr. YAN Wanquan (嚴萬泉) and Professor CHENG Shing Shin**
of Mechanical & Automation Engineering Department
Who received the Second Prize (Innovation Category) at the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- **Dr. CAI Mingjing (蔡明京) and Professor LIAO Wei Hsin (廖維新)**
of Mechanical & Automation Engineering Department
Who received the Faculty Outstanding Thesis Award 2020 in June 2021
- **Professor CHEN Benmei (陳本美)**
of Mechanical & Automation Engineering Department
Who received the Dean's Exemplary Teaching Awards 2020 in June 2021
- **Dr. DING Zhe (丁喆) and Professor LIAO Wei Hsin (廖維新)**
of Mechanical & Automation Engineering Department
Who received the Best Oral Presentations, Hong Kong Scholars Annual Symposium 2021 in June 2021
- **Mr. FAN Chun Yin (範鑄賢) and Mr. LIU Yuk Hei (廖鈺禧) and Mr. WONG Fei Yan Fiat (黃祥網) and Mr. NG Pui Hin (伍沛軒)**
of Mechanical & Automation Engineering Department together with Mr. LEUNG Chung Him (梁頌謙), Mr. CHAN Yik Ching (陳奕青) and Mr. TONG Tsz Hin (唐子軒) of Computer Science & Engineering Department, Miss CHEUNG So Yee (張素兒) of Physics Department, Mr. OUYANG Jianlin (歐陽健霖) of Business (IFAA) Programme, Miss HO Hei Man Erica (何儀敏), Mr. SIN Chun Him (洗雋謙) and Mr. MAN Tui Dor (文貝多) of Electronic Engineering Department, Miss FENG Yalei (馮雅蕾), Mr. LEUNG Chak Sum Wallace (梁澤森), Miss CHAN Siu Ting (陳筱庭) and Miss WONG Chi Ka (黃子嘉) of Medicine (MBChB) Programme
Who received the 3rd Runner-up in Robocon 2021 Hong Kong Contest in June 2021
- **Mr. LI Haoang (李昊昂)**
of Mechanical & Automation Engineering Department
Who received the Department Excellent Tutor Award 2019-20 and Faculty Outstanding Tutor Award 2020 in June 2021
- **Miss SHEA Yi Yui (佘伊蕊) and Miss NG Hui Yin (吳栩妍) and Mr. CHOW Tsun Yu (周浚宇) and Mr. SO Yan Shan (蘇恩舜)**
of Mechanical & Automation Engineering Department together with Mr. KWOK Lam Him (郭霖謙), Mr. SHEK Tsz Him (石梓謙), Mr. YIP Tin Yui (葉天睿), Mr. YAU Hung Kei (丘鴻基), Miss CHAN Yi Man (陳懿文) and Mr. WONG Tsz Sun (黃子汎) of Computer Science & Engineering Department, Miss CHO Man Yan (曹文欣), Mr. YEUNG Yuk Lun (楊育麟), Mr. LAU Yuk Chun Isaac (劉旭晉) and Mr. CHAN Wing Fung (陳穎峰) of Electronic Engineering Department, Mr. LO Kwan Wai (盧昆璋) of Social Science (DSPS) Programme
Who won the Best Performance Award, the Best Team Spirit Award and the Champion in Robocon 2021 Hong Kong Contest in June 2021
- **Professor ZI Yunlong (訾雲龍)**
of Mechanical & Automation Engineering Department
Who was elected as the Fellow of International Association of Advanced Materials (FIAAM) in June 2021
- **Professor CHEN Fei (陳翡)**
of Mechanical & Automation Engineering Department
Who was shortlisted as the Best Conference Paper Award Finalist at the IEEE International Conference on Advanced Robotics and Mechatronics (ICARM 2021) in July 2021
- **Professor CHEN Fei (陳翡)**
of Mechanical & Automation Engineering Department
Who received the Best Student Paper Award at the 11th IEEE International Conference on Cyber Technology in Automation, Control and Intelligent Systems (IEEE-CYBER 2021) in July 2021
- **Dr. JI Fengtong (紀鳳同) and Professor ZHANG Li (張立)**
of Mechanical & Automation Engineering Department
Who received the Best Oral Presentation Awards - 1st Class in the International Youth Conference of Bionic Science and Engineering Conference 2021 (IYCBSE2021) in July 2021
- **Professor LAU Tat Ming Darwin (劉達銘) and Mr. LEUNG Chun Ming (梁晉銘) and Miss LAM Wai Yi (林慧怡) and Mr. KWOK Chun Keung (郭俊強)**
of Mechanical & Automation Engineering Department
Who received the Best Paper Award (Application Category) at the Fifth International Conference on Cable-Driven Parallel Robots (CableCon 2021) for the paper titled "Real-World Development of a Cleaning CDPR for Primary Lamella Sedimentation Tanks" in July 2021
- **Dr. XIE Jing (謝婧)**
of Mechanical & Automation Engineering Department
Who received the Postgraduate Research Output Award 2020 in July 2021
- **Professor ZHANG Li (張立)**
of Mechanical & Automation Engineering Department
Who received the Research Fellow Award by the Research Grants Council of Hong Kong 2021/22 in July 2021
- **Dr. ZHOU Panpan (周盼盼) and Professor CHEN Benmei (陳本美)**
of Mechanical & Automation Engineering Department
Who received the 2021 IEEE CSS Beijing Chapter Young Author Prize at the 40th Chinese Control Conference (CCC 2021) in July 2021

- **Professor CHEN Shih Chi (陳世祈)**
of Mechanical & Automation Engineering Department
Who was selected as the Editors' Choice Article in the Journal of Precision Engineering in August 2021
- **Dr. HAN Dongkun (韓東昆) and Mr. LEUNG Yun Yee Martin (梁潤怡)**
of Mechanical & Automation Engineering Department
Who received the Silver Poster Award (Pedagogical Innovation Category): "An Intelligent Cloud Teacher for Unmanned Robotic Online Laboratory" in the CUHK Teaching and Learning Innovation Expo 2021 in August 2021
- **Mr. HO Ka Chun (賀嘉俊)**
of Mechanical & Automation Engineering Department
Who won the Champion in the Hong Kong Green Building Council "My Green Space" Student Competition 2020-21 in August 2021
- **Mr. LAW Ka Ho (羅家豪) and Mr. HUANG Hejun (黃和鈞) and Dr. HAN Dongkun (韓東昆) and Professor LAU Tat Ming Darwin (劉達銘)**
of Mechanical & Automation Engineering Department together with Professor LEE Ho Man Jimmy (李浩文) of Computer Science & Engineering Department, Professor JAGGI Sidharth (施義德) of Information Engineering Department, Professor SO Man Cho Anthony (蘇文藻) of Systems Engineering & Engineering Management Department, Dr. WONG Tik Lun Franko (黃迪倫) of Centre for Learning Enhancement And Research
Who received the People's Award: "An E-Learning Platform for Junior Teachers and Teaching Assistants in the Faculty of Engineering" and the Silver Poster Award (Pedagogical Innovation Category): "An E-Learning Platform for Junior Teachers and Teaching Assistants in the Faculty of Engineering" in the CUHK Teaching and Learning Innovation Expo 2021 in August 2021
- **Professor LAU Tat Ming Darwin (劉達銘) and Dr. BHUTTA Muhammad Usman M. and Miss LAM Wai Yi (林慧怡) and Mr. ZHAO Xinyan (趙鑫焱)**
of Mechanical & Automation Engineering Department together with Professor LEE Ho Man Jimmy (李浩文) of Computer Science & Engineering Department
Who received the Gold Poster Award (Educational Technology Innovation Category): "Mixed Reality in Hands-On Learning of Robotics" in the CUHK Teaching and Learning Innovation Expo 2021 in August 2021
- **Professor LAU Tat Ming Darwin (劉達銘) and Mr. KWOK Chun Keung (郭俊強) and Dr. BHUTTA Muhammad Usman M.**
of Mechanical & Automation Engineering Department together with Professor LEE Ho Man Jimmy (李浩文) and Mr. HUI Hon Kit (許漢傑) of Computer Science & Engineering Department
Who received the Silver Poster Award (Pedagogical Innovation Category): "Online Robotics Laboratory Framework for Interactive and Group Hands-On Learning" in the CUHK Teaching and Learning Innovation Expo 2021 in August 2021
- **Professor LIAO Wei Hsin (廖維新)**
of Mechanical & Automation Engineering Department
Who was appointed as the Choh-Ming Li Professor of Mechanical and Automation Engineering in August 2021
- **Professor LIAO Wei Hsin (廖維新) and Mr. CHAN Hung Tin Hugo (陳鴻天) and Mr. LIAO Hongpeng (廖鴻鵬) and Dr. GAO Fei (高飛) and Mr. ZHAO Xuan (趙軒)**
of Mechanical & Automation Engineering Department
Who received the Best Conference Paper Award in 2021 IEEE International Conference on Mechatronics and Automation in August 2021
- **Professor LU Yi-Chun (盧怡君)**
of Mechanical & Automation Engineering Department
Who received the Research Excellence Award 2020-21 in the Faculty of Engineering in August 2021
- **Professor REN Wei (任偉)**
of Mechanical & Automation Engineering Department
Who received the China's Excellent Young Scientists Fund 2021 in August 2021
- **Professor ZHANG Li (張立)**
of Mechanical & Automation Engineering Department
Who received the Best Conference Paper Award in the International Conference IEEE 3M-NANO 2021 in August 2021
- **Dr. CAI Minjing (蔡明京) and Dr. WANG Jiahua (汪家華) and Professor LIAO Wei Hsin (廖維新)**
of Mechanical & Automation Engineering Department
Who received the ASME Energy Harvesting Best Paper Award in September 2021
- **Mr. CHEN Keyu (陳柯宇) and Dr. GAO Qiang (高強) and Dr. FANG Shitong (方仕童) and Dr. ZOU Donglin (鄒冬林) and Professor LIAO Wei Hsin (廖維新)**
of Mechanical & Automation Engineering Department
Who received the 2021 Best Student Paper Award (2nd Place) at the 2021 ASME Smart Materials, Adaptive Structures, and Intelligent Systems Conference in September 2021
- **Professor LU Yi-Chun (盧怡君)**
of Mechanical & Automation Engineering Department
Who received the Xplorer Prize 2021 in September 2021
- **Professor ZI Yunlong (訾雲龍)**
of Mechanical & Automation Engineering Department
Who received the 2021 Nano Energy Award at the International Conference on Nanoenergy and Nanosystems 2021 in October 2021
- **Mr. LI Pak Kiu (李柏嬌)**
of Mechanical & Automation Engineering Department
Who received the Academic Creativity Award, Yu-Luan Shih and Academic Creativity Awards 2020/2021 in November 2021
- **Mr. LIU Wai Shing (廖偉成) and Mr. CHENG Chak Kit (鄭澤傑) and Professor ZHANG Li (張立)**
of Mechanical & Automation Engineering Department together with Dr. CHAN Kai Fung (陳啟楓) of Chow Yuk Ho of Technology Centre for Innovative Medicine
Who received the Bronze Award & Clinical Readiness Award in the Engineering Medical Innovation Global Competition 2021 ("EMedIC Global 2021") in November 2021

- **Miss WANG Xingyu (王星雨) and Miss KWOK Tien Wing (郭天穎) and Mr. WANG Wenhao (王文灝) and Mr. CHEN Yiwei (陳壹煒) and Professor XU Dongyan (徐東艷) and Dr. LI Yiyang (李奕陽)**
of Mechanical & Automation Engineering Department
Who received the Silver Award in the Intelligent Logistics Handling of the "Smart +" Category in the national finals of the 2021 China University Students Engineering Practice and Innovation Ability Competition in November 2021
- **Mr. WANG Yintao (王胤濤) and Mr. SHAO Qi (邵奇) and Mr. TIAN Zezhi (田擇直) and Professor CHEN Shih Chi (陳世祈)**
of Mechanical & Automation Engineering Department
Who won the Champion of the 2021 ASPE Student Challenge, Annual Meeting of American Society for Precision Engineering, Minneapolis, Minnesota, USA, in November 2021
- **Professor CHEN Fei (陳翡)**
of Mechanical & Automation Engineering Department
Who was shortlisted as the T.J. Tam Best Paper in Robotics Award Finalist at the IEEE International Conference on Robotics and Biomimetics (IEEE-ROBIO 2021) in December 2021
- **Dr. HAN Dongkun (韓東昆)**
of Mechanical & Automation Engineering Department
Who received the Gold winner for the Technology Innovation Award at the 16th eLearning Forum Asia 2021 in December 2021
- **Dr. LI Zhejun (李喆琿)**
of Mechanical & Automation Engineering Department
Who received the 2021 Young Scientist Award in Engineering Science in the 28th Annual Conference of Hong Kong Institution of Science in December 2021
- **Professor YAM Yeung (任揚)**
of Mechanical & Automation Engineering Department
Who received the Gold Award in the Smart People (Smart Education and Learning) Category in the Hong Kong ICT Awards 2021 in December 2021
- **Mr. CHOI Ho Yin Issac (蔡浩研)**
of Systems Engineering & Engineering Management Department
Who won the 1st Runner-up in the Citibank Disruptive Client Experience in the Digital Banking Era, HKGCC Business Case Competition 2020 in January 2021
- **Professor YU Xu Jeffrey (于旭)**
of Systems Engineering & Engineering Management Department
Who won the 1st Prize of The Chinese Institute of Electronics Nature Science Award for Fundamental Theory and Method of Uncertain Data Management 2020 in January 2021
- **Professor WONG Kam Fai (黃錦輝)**
of Systems Engineering & Engineering Management Department
Who was elected as the Fellow of the Association for Computational Linguistics in February 2021
- **Mr. XU Xiang (徐翔)**
of Systems Engineering & Engineering Management Department
Who won the 2018-19 General Education Best Essay Award, CUHK in February 2021
- **Mr. CHEUNG Cheuk Nam Janson (張緯嵐) and Mr. KWOK Chun Hei (郭進希)**
of Systems Engineering & Engineering Management Department
Who received the MERIT Award in the 7th Hong Kong University Student Innovation and Entrepreneurship Competition in May 2021
- **Professor YU Xu Jeffrey (于旭)**
of Systems Engineering & Engineering Management Department
Who was recognized by inclusion in the Guide2Research's World's Top 1000 Scientists in May 2021
- **Professor LONG Zhuoyu Daniel (龍卓瑜)**
of Systems Engineering & Engineering Management Department
Who was selected as the Finalist of the 2021 Manufacturing & Service Operations Management Best Operations Management Paper in Operations Research, INFORMS in July 2021
- **Miss YAU Hui Ching (游翹晴)**
of Systems Engineering & Engineering Management Department
Who received the Innovation and Technology Scholarship 2021 in July 2021
- **Professor MENG Mei Ling Helen (蒙美玲) and Mr. LU Hui (盧輝) and Mr. WANG Disong (王迪松) and Mr. SONG Changhe (宋長河)**
of Systems Engineering & Engineering Management Department
Who won the Championship of SciTech Challenge 2021, Hong Kong Science & Technology Parks in October 2021
- **Professor MENG Mei Ling Helen (蒙美玲)**
of Systems Engineering & Engineering Management Department
Who won the Gold Award of the Hong Kong ICTAwards 2021 Smart People (Smart Education and Learning) in November 2021
- **Professor AHN Dohyun (安濤賢) and Mr. ZHENG Lewen (鄭樂文)**
of Systems Engineering & Engineering Management Department
Who received the Runner-up Prize of the Best Contributed Theoretical Paper Award at the Winter Simulation Conference 2021, INFORMS in December 2021
- **Mr. ZHU Linglingzhi (朱凌靈智)**
of Systems Engineering & Engineering Management Department
Who received the "優秀報告" Award at 第七屆中國運籌學會數學規劃分會研究生論壇 in December 2021



香港中文大學
The Chinese University of Hong Kong