

DEPARTMENT OF

# Civil Engineering

土木工程系 Newsletter

MARCH - AUGUST 2022



THE UNIVERSITY OF HONG KONG

## Professor Y.K. Cheung (張佑啟教授) 1934 – 2022

S.B.S., O.B.E., Ph.D., D.Sc., D.E., D.Sc. (Hon), L.L.D. (Hon), F.R.Eng., F.R.S.C., M.C.A.S., F.H.K.Eng., F.H.K.I.E. (Hon), F.I.A.C.M.



Professor Cheung Yau-Kai, Honorary Professor and Special Advisor, passed away at the Queen Mary Hospital on September 23, 2022 at the age of 88.

Professor Cheung was born on September 18, 1934. He was awarded his B.Sc. degree in the South China Institute of Technology in 1958, a Ph.D. degree (Wales) in 1964, a D.Sc. (Wales) in 1973, and a

D.E. (Adelaide) in 1982. In 1999, he was awarded an honorary doctorate by the Shanghai University of Technology. In 2000, he was awarded an honorary degree D.Sc. by The University of Hong Kong and an honorary degree LL.D. by the University of Wales.

He became Professor of Civil Engineering (1970), University of Calgary, Canada and Professor of Civil Engineering (1974), University of Adelaide, Australia. Professor Cheung has made a valuable contribution to The University of Hong Kong where he was Acting Deputy Vice-Chancellor and had served in various prominent capacities since joining the University as Professor and Head of Civil Engineering in 1977. He held the Taikoo Chair of Engineering from 1977 to 2000. In 1978 he became Dean of Engineering, a position he held for nine years. From 1988 to 1998 he was Pro-Vice-Chancellor, Acting Registrar from 1996 to 1998, Acting Deputy Vice-Chancellor from 1996 to 2000, Special Advisor to the Vice-Chancellor from 2000 to 2011, Special Advisor to Department of Civil Engineering from 2000 to 2007 and Honorary Professor from 2000 to 2022. He was Honorary Professor of 17 universities in Mainland China.

He was awarded Honorary Fellow of The Hong Kong Institution of Engineers (HKIE) in 1991 and the HKIE Gold Medal in 2004. He joined the HKIE Hall of Fame in 2010. He was elected a Fellow of the Royal Academy of Engineering in 1987 and the Chinese Academy of Sciences in 1999, and was awarded the National

Natural Science Prizes of China in 1990 for his pioneering work in developing the Finite Strip Method and in 1999 for working together with his research team on Nonlinear Vibrations. In 2001, he was elected President of the Hong Kong Academy of Engineering Sciences and in 2002 he was elected Fellow of the Royal Society of Canada. In 2003, he was awarded the N.O. Myklestad Award by the Technical Committee on Vibration and Sound of the American Society of Mechanical Engineers and the Medal of Excellence in Engineering Education by the World Federation of Engineering Organisations. In 2004, he received the IACM O.C. Zienkiewicz Award by The International Association for Computational Mechanics and the APACM Special Award for Senior Scientists by Asian Pacific Association for Computational Mechanics. He served as Vice-President of the International Association of Computational Mechanics from 1995 to 2002 and was awarded the International Association for Computational Mechanics Fellows Award in 1998.

In 1995, Professor Cheung was awarded the Officer of the Most Excellent Order of the British Empire (O.B.E.) and in 2003, Professor Cheung was again awarded the Silver Bauhinia Star (S.B.S.) Medal in the Hong Kong Government House for his long-time service to the community, and for his contribution to raising the standard of the engineering profession.

He served as Chairman of the HKIE Accreditation Board from 1997 to 2001 and during this period HKIE became one of the signatories of the Washington Accord. A committee for Accreditation of Computer Science degrees and another committee for Accreditation of Higher Diplomas were also established by the Board under his chairmanship.

Professor Cheung's generous contributions to the Department will always be remembered.





## Departmental Events

### *The Centre for Innovation in Construction and Infrastructure Development (CICID) Logo Design Competition 2022 is in full swing*

As CICID celebrates its 20th Anniversary in 2022, the Organising Committee of the CICID 20th Anniversary Conference has decided to launch a competition for a logo design which could reflect the changing focus of CICID over the past 20 years while setting the scene for the next 20 years and more. The competition is open to HKU Alumni, staff, students and associates of HKU CICID, and submissions shall be made in the Participant's own capacity. The Winning Entry will be announced in November.

### *HKIEGD and HKGS Webinar and Seminar*

**Professor Z.Q. Yue** was invited jointly by HKIE – Geotechnical Division and Hong Kong Geotechnical Society and delivered a technical webinar and seminar on July 20, 2022 at HKIE Headquarters. The seminar title is "An innovative and accurate test method for particle size distribution of soils". In this webinar and seminar, Professor Yue presented a new washing and sieving method that he has developed in recent years for both testing the soil PSD and separating the soil into various size groups of gravel, sand, silt and clay materials. The material in each size group can be used for independent checking and testing of the quality of the proposed new method. These checking and testing methods include mass balance, digital image observation, hand feel test, plasticity index, permeability test, and SEM images with chemical elements. Many case studies were given to illustrate the new test method and the limitations and drawbacks of the existing four standard methods for testing soil PSD in Hong Kong and globally. The four standard test methods include the dry and the wet sieving methods for gravel and sand with the size greater than 0.063 mm and the Pipette and Hydrometer sedimentation methods for silt and clay with the size less than 0.063 mm. Professor Yue expressed his wish that this new method can become a new standard method for testing soil PSD in Hong Kong and internationally. About 200 people attended on site and on zoom.



## Staff Awards/Activities/News

### *Staff Awards*

**Dr. Sérgio Lourenço** has been awarded the 2021 British Geotechnical Association Medal to the paper *Evolution of surface roughness of single sand grains with normal loading* published in *Géotechnique*, together with Ting Yao and Beatrice Baudet, from the Chinese Academy of Sciences and University College London. The paper was selected out of fifteen entries and judged as 'genuinely thought provoking'. The British Geotechnical Association Medal is awarded annually by the BGA to a paper substantially authored by a BGA member or BGA members published in an international journal and from BGA, ISSMGE and ISRM conferences, and submitted for consideration of the award.

**Dr. Clarence E. Choi** and his collaborators were recently awarded the best paper award in journal *Landslides*, a top journal in the geotechnical discipline, by the International Consortium on Landslides (ICL), a partner NGO of UNESCO. This honour was to be awarded in 2020, but was delayed due to the pandemic. The paper is entitled, "*Depositional mechanisms and morphology of debris flow: physical modelling*" was assessed by the ICL board to be the best journal paper in 2019 by the editorial board.

**Dr. Clarence E. Choi** and his collaborators were awarded the HKIE Geotechnical Paper Award in May 2022. The award is a biennial honour given to the best publication in recent five years submitted by geotechnical researchers and practitioners in Hong Kong. The paper is entitled, "*Design recommendations for single and dual debris flow barriers with and without basal clearances*" is deemed to have potential to advance local practice and is of the highest quality.



**Dr. Pengfei Sun**, a postdoctoral fellow in Professor C.Y. Tang's group, received the Excellent Presentation Award for The First Greater Bay Area Symposium on Membranes and Membrane Processes.

**Dr. Zhe Yang**, a Research Assistant Professor working with Professor C.Y. Tang, received the Outstanding Paper Award for The 6th National Conference on Water Treatment and Reuse of China.



## Staff Activities

**Professor C.Y. Tang** presented the following keynote/invited talks:

“Interlayered thin film nanocomposite membranes: mechanisms, separation performance, applications, and design criteria”, Keynote speech, The 13th Conference of The Aseanian Membrane Society, July 4-7, 2022, Singapore.

“Membranes for water and beyond,” TechTalk, Tam Wing Fan Innovation Wing Two, The University of Hong Kong, July 28, 2022.

## Professor Wei Pan

chaired and moderated the morning session “decarbonisation” of the ICE HKA Annual Conference 2022 entitled “Surviving the Climate Crisis: How prepared is the construction industry?” which was held in Hong Kong on April 29, 2022.

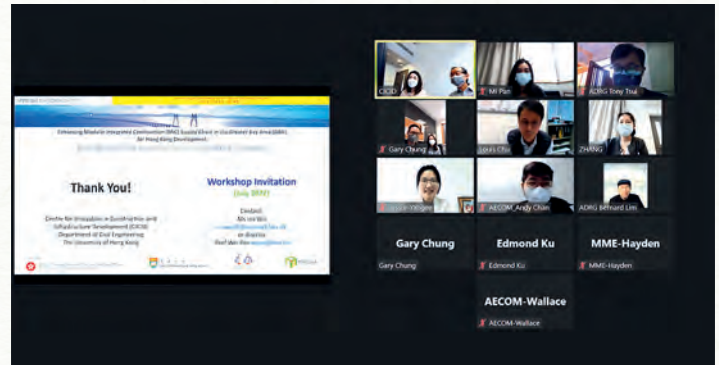
presented a paper entitled “A Holistic Framework for Determining the Trade-off between Embodied and Operational Carbon Emissions of High-rise Residential Buildings” co-authored with his research team Dr. Yue Teng, Ms. Yefei Bai, Dr. Cong Yu and Ms. Jiayi Xu at the 2022 World Building Congress (WBC) organised online June 27-30, 2022.

was invited to deliver a presentation at one workshop organized by DEVB to discuss the development of Modular Integrated Construction (MiC) with government officials from DEVB, Planning Department, Lands Department, etc. on July 12, 2022.

coordinated and organized one workshop over a half-day course with the project steering committee including the investigators and project supporters and industry collaborators to discuss research issues and potentials regarding Modular Integrated Construction (MiC) structure, transportation management, and smart construction on June 28, 2022. This workshop was held for the project ‘Modular Integrated Construction 2.0+ for Quality and Efficient Tall Residential Buildings through Advanced Structural Engineering, Innovative Building Materials and Smart Project Delivery’ funded by the Research Impact Fund (RIF: R7027-18) of the Hong Kong Research Grants Council (RGC).



coordinated and organized three focus group meetings with stakeholders (e.g. clients, consultants, main contractors, and MiC suppliers) from three Hong Kong pilot MiC projects (i.e. WCH, InnoCell and PSKDQ) from May to July 2022, having explored the perceptions of the participants on the MiC supply chain measurement framework and Key Performance Indicators (KPIs). The focus group meetings were held for the project ‘Modular Integrated Construction Supply Chain in the Greater Bay Area’ funded by the Strategic Public Policy Research (SPPR) Scheme (S2019.A8.013.19S).



**Professor Jun Yang** presented the following keynote/invited talks:

Zeng Guoxi Lecture entitled “Flow Failures of Geomaterials: Toward a Better Understanding and Practice” on May 14, 2022. The Lecture, which was established in 2007 and is held annually thereafter, is named after late Professor Zeng Guoxi of Zhejiang University, one of China’s pioneers in geotechnical research, education and practice. Speakers are nominated and selected by the Lecture Committee from around the world. During his talk Professor Yang gave an overview of the subject matter first, focusing on several critical aspects that confuse researchers and practising engineers; he then presented recent advances in understanding the mechanics of flow failures from experimental, theoretical and numerical perspectives, and discussed the implications of these new findings for geotechnical engineering practice; and finally, he gave an outlook of future research in the area. The lecture attracted more than 700 attendees from around China and overseas and was very well received according to the organizer.

HKIE Geotechnical Division and Hong Kong Geotechnical Society technical talk on July 18, 2022. The talk, entitled “The Critical State Friction Angle of Granular Soils: Some New Insights”, was conducted via a hybrid mode at the HKIE headquarters. During the talk Professor Yang raised questions about a widely accepted notion on the effect of grading in soil mechanics textbooks as well as in geotechnical engineering design guides, and then presented experimental evidence and numerical simulations showing that this notion is conceptually inappropriate and should be taken with caution. He also



discussed the implications of the study for geotechnical engineering practice. The talk was attended by over 200 attendees. Dr. Andrew Malone, former head of the Geotechnical Engineering Office (GEO), commented that *"... the talk yesterday was beautifully presented. It is refreshing to hear a proper presentation on soil mechanics in Hong Kong"*.



Theme Lecture and Paper at the 4<sup>th</sup> International Conference on Performance-based Design in Earthquake Geotechnical Engineering on July 15-17, 2022. The paper, entitled "Cyclic failure characteristics of silty sands with the presence of initial shear stress", was co-authored by Dr. Xiao Wei, a former Ph.D. student at HKU and now a faculty member at Zhejiang University. Dr. Wei's Ph.D. thesis was awarded the Ringo Yu Prize for Best Ph.D. Thesis in Geotechnical Studies by The Hong Kong Institution of Engineers (HKIE) in 2017.

## Staff News

**Dr. W.J. Cao** joined the Department of Civil Engineering as Assistant Professor in June 2022. Before joining HKU, she worked as an Assistant Professor at TU Delft and Ph.D. researcher at Future Cities Laboratory, Singapore-ETH Centre. She obtained her Ph.D. from National University of Singapore and B.Eng. from Tongji University. Dr. Cao is a bridge person with 5-years' engineering experience and an experiment person in structural health monitoring for both bridges and railways.

Her research interest is to develop a fundamental understanding of circularity in the Engineering and Construction Industry. She also works on cyber civil infrastructure with a focus on data interpretation for infrastructure system diagnosis and prognosis.



(Photo credit: Frank Auperlé)

**Dr. Clarence E. Choi** was appointed Chair of the Geotechnical Pioneers Image Committee of the Geotechnical Division Committee of The Hong Kong Institution of Engineers (HKIE). The committee is tasked with encouraging high school students to pursue a career in geotechnical engineering, organising technical workshops on special geotechnical topics for geotechnical division members, and to uphold the image of the geotechnical discipline.

## Professor Wei Pan

has been appointed Executive Director of HKU Shenzhen Institute of Research and Innovation (SIRI) with the term till March 31, 2024.



has been re-appointed Member of the Technical Committee on the Code of Practice for Precast Concrete Construction of the Buildings Department of the HKSAR Government with the term till December 31, 2023.

has been appointed Member of the Sustainable Development Committee of the Hong Kong Green Building Council with the term till December 31, 2023.

has been re-appointed Member of the Modular Integrated Construction (MiC) Vetting Sub-committee on Construction Innovation and Technology Fund (CITF) with the term till August 31, 2024.

has been appointed Member of the Construction Industry Council (CIC) Advisory Panel for Signature MiC Course: Professional Certificate on MiC Project Implementation (Project Managers).

has been appointed a Judge and Member of OC for the MiC Achievement Ceremony.

## Fellowships:

Professor C.Y. Tang is named as a Global Chair (Distinguished International Visiting Professor) by Bath University.

Professor C.Y. Tang is elected as a Fellow of the Institute of Civil Engineers.

Dr. Lu Peng, a postdoctoral fellow in Professor C.Y. Tang's group, received the RGC Postdoctoral Fellowship Scheme Award from the Research Grants Council of Hong Kong.

## Research Grants

**Dr. Clarence E. Choi** (PI) has been awarded a Green Tech Fund project entitled, *"Carbon-friendly Pneumatic Flow Mixing (PFM) to Rapidly Recycle Waste Mud for Land Reclamation in Hong Kong."* The project aims to rationalise the use of low-carbon PFM for routine land reclamation in Hong Kong. The project is in collaboration with Dr. Hailong Ye (Co-PI) of the Department, Dr. Huanfeng Duan (Co-PI)



of the Hong Kong Polytechnic University, Dr. Siew Wei Lee (Co-PI) of the Geotechnical Division Committee of the Hong Kong Institution of Engineers, and the Sustainable Lantau Office and Ports Work Division of the Civil Engineering and Development Department of the HKSAR Government.

**Dr. M.F. Guan** has been granted a Shenzhen-Hong Kong-Macau Technology Research Programme (Type C) research project working on *Multimode-based rolling prediction of rainstorm-induced urban flooding in real time*.

## Student Awards

Mr. Louis Brighton (CivE 4 2021-22) was awarded the HKU Centenary Scholarship for Civil Engineering Students 2021-22.

Mr. Chan Hin Shing Cyrus, Mr. Chow Cheuk Hei Scott, Mr. Huang Zeyang, Mr. Lei Ting Long, Ms. Long Tin Hei and Ms. To Ling Yin Tiffany (Grad Jun 2021) were awarded the Ms. Chu Yuk Baw Prize in Civil Engineering (Capstone Design Project) 2020-21.

Mr. Chan Ho Man (CivE 4 2021-22) was awarded the Leung Che Kwong Lai Shim Memorial Scholarship, Scholarship for Civil Engineering Students 2021-22.

Mr. Chan Ka Chun (CivE 3 2021-22), Mr. Chung Chun Ning (CivE 4 2021-22), Ms. Ho Yuen Shun (CivE 3 2021-22), Ms. Koon Chiu Yue (CivE 3 2021-22), Mr. Shum Hei Chun (CivE 3 2021-22), Mr. Shum Tsz Long (CivE 3 2021-22) and Mr. Tsui Chi Yu Dominic (CivE 4 2021-22) were awarded the Talent Development Scholarship 2021-22.

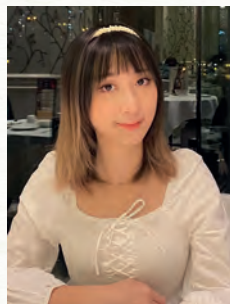
Mr. Chan Kai Ho (CivE 2 2021-22) and Mr. Mak Kam Ho (CivE 3 2021-22) were awarded the Professor YK Cheung Scholarship 2021-22.

Mr. Chan Man Hei Matthew (MSc(Geo)) was awarded the AGS Scholarship.

Mr. Chen Jiajun (Grad Jun 2021) was awarded the Chow Che King Prize 2020-21.

Ms. Cheung Hoi Yee (CivE 3 2021-22) was awarded The Hong Kong Jockey Club Scholarship (Renewal in 2021-22).

Ms. Chu Chun Ching (CivE 2 2021-22) was awarded the Chun Wo Foundation Scholarship 2021-22, The HKU Civil Engineering Departmental Scholarship 2021-22, the Endeavour Merit Award under the HKSAR Government Scholarship Fund 2021-22 and the Talent Development Scholarship 2021-22.



Mr. Chu Tsz Wai (Grad Jun 2021) was awarded the Centenary Scholarship for Engineering Students, the Ms. Chu Yuk Baw Prize in Civil Engineering (Capstone Design Project) 2020-21 and the Civil Engineering Project Prize 2020-21.

Mr. Julian Edric (CivE 4 2021-22) was awarded the Centenary Scholarship for Engineering Students and the Tai Tung-Ngok Prize in Civil Engineering 2020-21.

Mr. Fok Pak Hei (Grad Jun 2021) was awarded the Environmental Engineering Prize 2020-21 and the Wing Lung Bank Ltd Prize in Civil Engineering 2020-21.

Ms. Fok Yuen Ting (CivE 2 2021-22) was awarded the Kai Chong Tong Scholarship 2021-22.

Ms. Ho Ying Wing (Grad Jun 2021) was awarded the Gammon Construction Limited Prize in Civil Engineering 2020-21.

Ms. Hui Wai Ying Jennifer (MSc(IPM)) was awarded the Tsoi Tit Long Scholarship 2021-22.

Mr. Hung Ching Lung (CivE 4 2021-22) was awarded the Hong Kong Chiu Chow Chamber of Commerce Scholarship 2021-22.

Mr. Ip Pak Yin (CivE 2 2021-22) was awarded the AECOM Environmental Engineering Scholarship 2021-22 and the Kai Chong Tong Scholarship 2021-22.

Mr. Kam Chun Yu (CivE 3 2021-22) was awarded the CL Tse Prize in Civil Engineering 2020-21 and the Leung Ting Kui Scholarship 2021-22.

Mr. Lam Cheuk Ting (MSc(TranspE)) was awarded the Highways into the Next Century 1996 International Conference Scholarship 2021-22.

Mr. Lam To Lun Jeffrey (MSc(EnvE)) was awarded the Madam Ng Man Ching Prize 2021-22.

Mr. Leung Chun Hei (CivE 3 2021-22) was awarded the Hip Hing Construction Scholarship 2021-22.

Mr. Leung Chun Hoi (CivE 3 2021-22) and Mr. Wan Lap Yin (CivE 4 2021-22) were awarded the Western Harbour Tunnel Scholarship 2021-22 (Renewal).

Mr. Leung Jing Shang Gordon (Grad Jun 2021) was awarded the Ms. Chu Yuk Baw Prize in Structural Engineering 2020-21 and the HK Cheng Prize in Civil Engineering.

Mr. Leung King Ho (CivE 4 2021-22) was awarded the HKIE Geotechnical Division LPM Contractors Scholarship 2021.

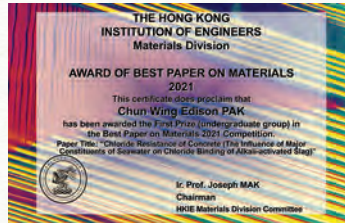


Mr. Ng Cheuk Lun (CivE 3 2021-22) was awarded the Ho lu Kwong Prize in Civil Engineering 2020-21 and the Talent Development Scholarship 2021-22.

Mr. Ng Kam Ho (CivE 3 2021-22) was awarded the Civil 77 Scholarship 2021-22.

Ms. Ng Wai Lam (Grad Jun 2021) was awarded the Ms. Chu Yuk Baw Prize in Civil Engineering (Final Year Project) 2020-21.

Mr. Pak Chun Wing Edison (Grad Jun 2021) was awarded the HKIE Materials Division: Best Paper on Materials 2021 Competition.



Mr. Shum Hei Chun (CivE 3 2021-22) was awarded the AECOM Geotechnical Engineering Scholarship 2021-22.

Mr. Wan Long Kin (CivE 3 2021-22) was awarded the Endeavour Merit Award under the HKSAR Government Scholarship Fund 2021-22.

Mr. Wong Chi Ho (CivE 4 2021-22) was awarded the Li Pai-lin Prize in Civil Engineering 2020-21.

Mr. Wong Chung Heng Wilson (CivE 3 2021-22) was awarded the Edward Keller Achievement Award in Civil Engineering 2020-21.

Mr. Wong Kwun Man (CivE 2 2021-22) was awarded the AECOM Civil/Structural Engineering Scholarship 2021-22.

The final year project (FYP) of Mr. Louis Brighton, who was supervised by Dr. Clarence E. Choi, won the third place award in the Association of Geotechnical and Geoenvironmental Specialist (AGS) HK best FYP project competition (2021/2022 exercise) and Merit Prize for 2021/2022 Best Final Year Project Award organized by the Hong Kong Institution of Engineers (HKIE) Civil Division Committee for his work on applying transient seepage analysis to routine slope design in Hong Kong.



Mr. Daryl Kevin, a civil engineering graduate (Class of 2022) was nominated for the HKIE Civil Division Best FYP Award and

won the Grand Award. His FYP project was on the Seismic Performance of Precast Concrete Segmental Bridge Piers with Resettable Sliding Joints. The Project attempts to improve the seismic resilience of bridge piers by providing sufficient seismic isolation mechanism to minimize damage from earthquakes. Supervised by Professor F.T.K. Au and his team, he conducted a series of shaking table tests and numerical simulations to assess the performance of the scheme.



Daryl receiving the award from Mr. Fong Hok-Shing.



Group photo of all the award winners with representatives of the HKIE Civil Division.

The final year project paper of Mr. Ammar Asir Hasan, who was supervised by Dr. H.L. Ye, was awarded a certificate of merit for outstanding performance by HKIE in the Materials Division.



Mr. Chan Chak Kwan, a 2022 graduate of the Department of Civil Engineering, was awarded a scholarship under the Hong Kong Scholarship for Excellence Scheme (HKSES). He will be studying M.Sc. in Civil and Environmental Engineering at Stanford University in September 2022. The scholarship will cover his tuition fees up to HK\$300,000 per annum.





The Hong Kong Scholarship for Excellence Scheme was first launched in 2014 to support local students to pursue studies at world-renowned universities outside Hong Kong. A total of 650 applicants competed for this year's HKSES and 76 of them were selected as the eighth cohort of awardees.



Mr. Lam Hiu Fai Arthur, a Final Year Project student of Professor Z.Q. Yue, received the outstanding award for the ASM Technology Award 2022 on June 30, 2022. He presented his FYP entitled "Investigation on the Feasibility of Using Completely Decomposed Tuff (CDT) as a River Sand Substitute for Concrete Production" for this award.



Mr. Li Long, a Ph.D. student of Professor C.Y. Tang, received the Best Presentation Award for The First Greater Bay Area Symposium on Membranes and Membrane Processes.

Mr. Yang Zhang, a Ph.D. student supervised by Professor Wei Pan, was awarded the Best Student Paper of the Congress and the Best Paper Award in the Category "Smart and Sustainable Buildings and Cities" in the World Building Congress (WBC) 2022. The congress was held by the International Council for Research and Innovation in Building and Construction (CIB) June 27-30, 2022, in Melbourne, Australia. The WBC is organized every three years and is a major conference in the disciplines of the built environment. The awarded paper is entitled "Reducing embodied carbon emissions of concrete modules in high-rise buildings through structural design optimisation" coauthored by Professor Wei Pan and Dr. Yue Teng, funded by the General Research Fund (Project No. 17201120) and the Collaborative Research Fund (Project No. C7047-20GF) of the Hong Kong Research Grants Council.



A team of four students, Ng Cheuk Lun Flexor, Lam Cheuk Yin Bryan, Won Dzi Hei Isaac and Koon Chiu Yue Kachina (CivE 4 2021-22) won the Happy Green Campaign Competition along the theme of "Decarbonisation our New Mission". The winning project involved the design of a bus stop with solar panels and green walls, which helped reduce the impacts of air pollution and heat island effect on the environment of roadside bus stops. The prize presentation ceremony was held on July 9, 2022 by the HK Electric.







## About Project Mingde

Project Mingde was established by the Department of Civil Engineering in 2004. It provides an open platform for nurturing our students to acquire not only hard skills, but also to possess soft skills, such as a sense of social responsibility, by participating in real-world on-going civil engineering projects in remote impoverished regions in China and other Asian countries. We have a slogan “We grow as we build” and that is the core value of Project Mingde. Project Mingde attracts not only Civil Engineering students, but also students from other disciplines and institutions to participate in this meaningful programme. We hope that students would have personal growth

through this experiential learning opportunity and participation in various real-life projects; and also education in impoverished localities in China could be provided. For more information about Project Mingde, please visit our official website at <http://www.civil.hku.hk/mingde/>.

Alumni are welcome to join Project Mingde and if you are interested to be part of us, please contact Dr. C.P. Wong at [cpwryan@hku.hk](mailto:cpwryan@hku.hk) (for projects) or Dr. K.H. Law at [adalaw@hku.hk](mailto:adalaw@hku.hk) (for communications).

## Restoration and Expansion of Guigang Duling Primary School

Project Mingde organized a summer training programme from June to August this year with 19 students participated in the restoration and expansion project of Guigang Duling Primary School. The reinforced concrete frame of the Composite Building (with kindergarten for early childhood education and a teacher dormitory) was completed on schedule. The students supervised the construction works using 360 photos for virtual site inspections, revised the BIM model according to the updates of architectural designs, and designed the rainwater recycling and drainage systems for the building. According to the programme, the Composite Building will be ready in use for the next academic year in September.



The reinforced concrete frame of the Composite Building was successfully completed in July.



**Your gift – of any amount – will make a difference to the students in the  
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Name (Mr. / Mrs. / Ms. / Dr.): \_\_\_\_\_  
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Contact Phone No. : \_\_\_\_\_ Email Address : \_\_\_\_\_

Amount of gift : HK\$ \_\_\_\_\_ Cheque Number: \_\_\_\_\_  
 Cross Cheque Enclosed (Payable to “The University of Hong Kong”)

Please send this form together with the cheque to Department of Civil Engineering, HW6-18A, Haking Wong Building, The University of Hong Kong, Pokfulam Road, Hong Kong

**Thank you for your gift!**



## Renovation of St. Barnabas' Society and Home

Project Mingde continues its collaboration with Saint Barnabas' Society and Home. One of the main tasks in the renovation of the SBSH centre is the re-design and development of its front and back yards. The new gardens will provide children, the elderly and the disabled a safe outdoor recreational space. A design was chosen after a series of interdisciplinary workshops in January, which allowed civil engineering and architectural students to work together. The new front yard will include an innovative garden bench, which the materials used and the shape of the bench are unusual. A suitable way to connect the bench firmly to the ground has to be found.

This summer, five civil engineering and two architectural students participated in a workshop to construct wooden molds for the bench supporting structures, which are a series of closely spaced thin trapezoidal plates made from concrete and bricks. They also cut out the wooden seats which will be slotted into the supporting structures. Through this workshop, students acquired wood cutting skill and gained knowledge in making wooden molds for concrete



Students participated in a workshop to construct wooden molds for the bench supporting structures.

structures. After further workshops in the Concrete Lab of our department, the concrete formula was finalized, and eight supporting structures were cast. A prototype bench section will be constructed in October for further tests and investigations.



The bench supporting structures were cast and tested in the Concrete Laboratory.

### Name of students who participated in various projects:

#### June 20 – August 12 (Summer Training Programme):

CHAN Chun Ho, CHAU Hok Hei Ryan, CHU Kin Fung, KWOK Chun Ting, LEUNG Sin Wai, SIU Lok Hang, TAM Shun Hei, WONG Kwun Man, YAU Hok Him, YIP Pak Hin, CHAN HO Chun Adrian, CHOW Chun Yan Peter, LEE Nok Man Brian, LEUNG Wing Hang Victor, LI Ngai Yin, MOK Dickens, TSUI Cheuk Sum Sam, CHOI Kit Ming Raymond, YEUNG Chung Yin Louis

#### August 25 – September 30 (SBSH Prototype Workshop):

WONG Kar Hou, YADUKA Dhruv, HO Cheuk Hei, LI Yu Yat, Jeffrey, LI Ka Yin Jeffrey, LIN Mengfei (Architecture), YAN Chun Ki (Architecture)

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