



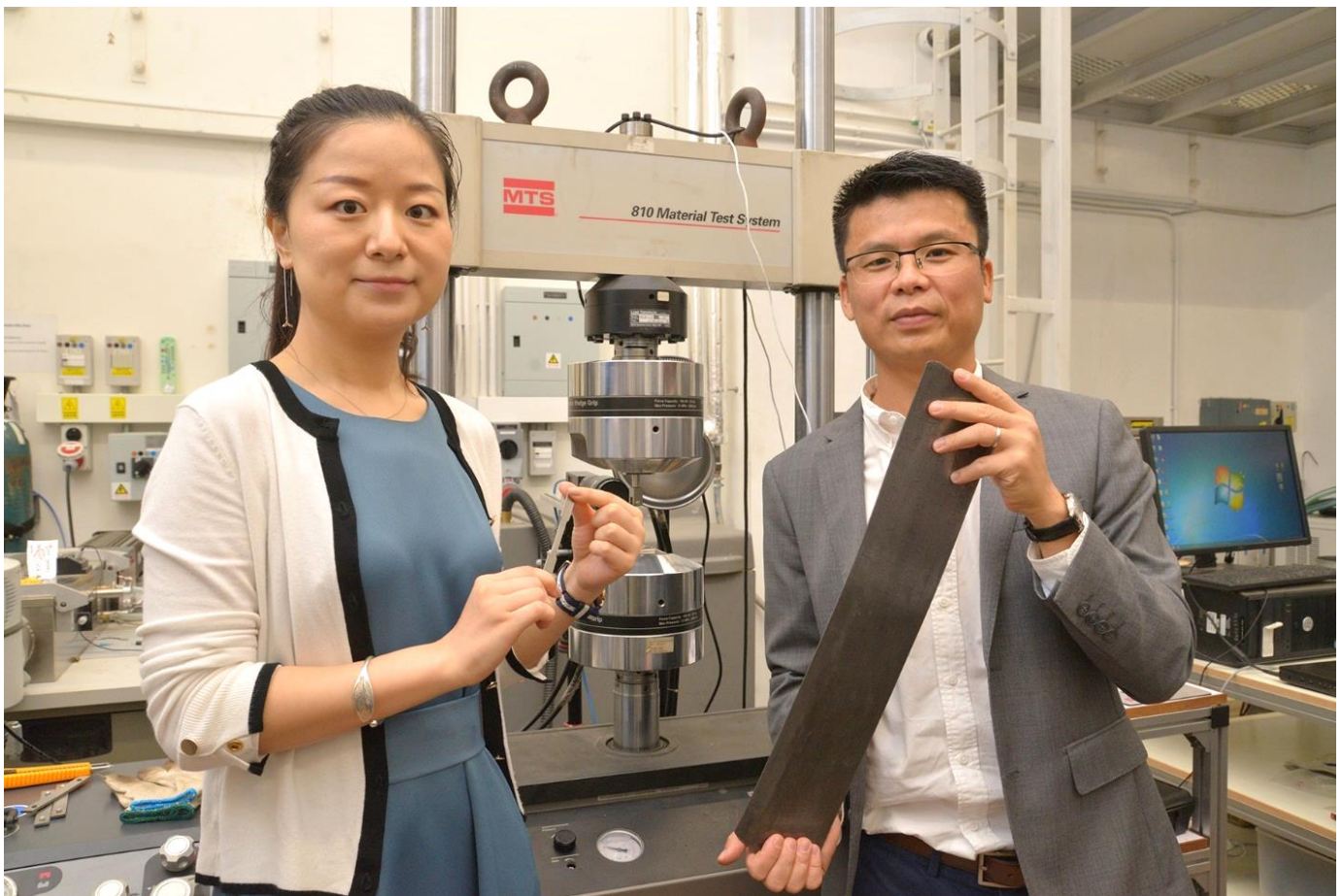
香港大學  
THE UNIVERSITY OF HONG KONG

Department of Mechanical Engineering

Feb 2021/ No.1

## RESEARCH

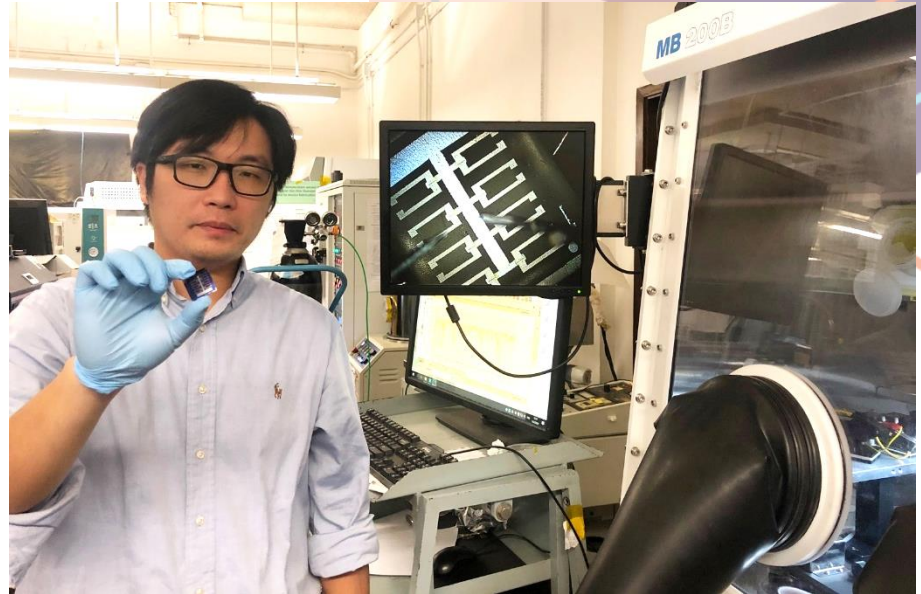
HKU ME research breakthrough: a Super Steel that's super strong and super tough



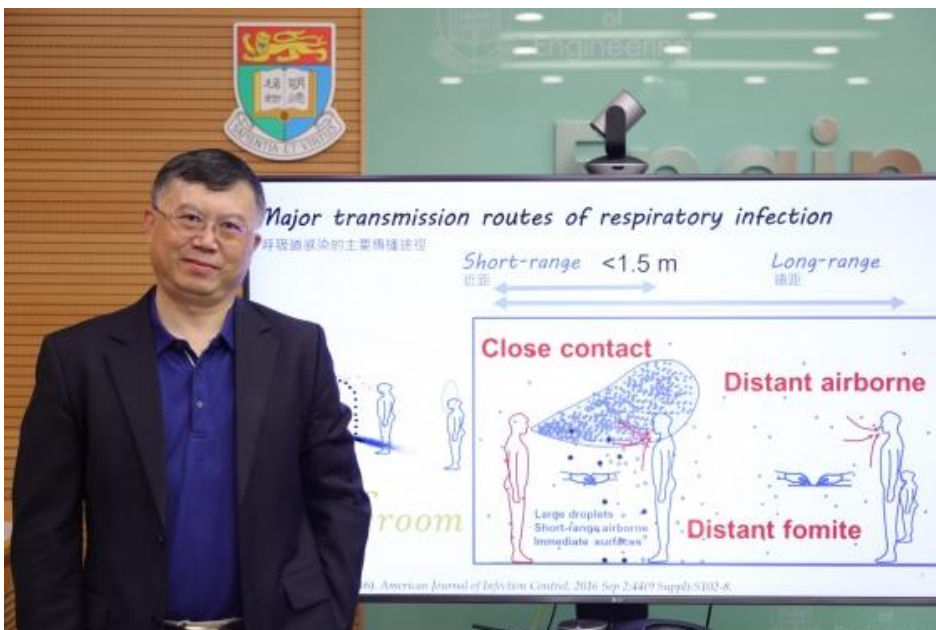
The Super Steel project led by Professor Mingxin Huang with collaborators at the Lawrence Berkeley National Lab (LBNL), has made important breakthrough in its new super D&P steel (produced using a new deformed and partitioned method) to greatly enhance its fracture resistance while maintaining super strong ...[Read more](#)

## A breakthrough in developing staggered structure monolayer organic field effect transistors

Dr Paddy K.L. Chan and his team have successfully developed staggered structure monolayer organic field effect transistors (OFETs) with a record low width normalized contact resistance down to 40 W-cm. This low contact resistance achievement is a critical cornerstone to miniaturize the OFETs ...[Read more](#)



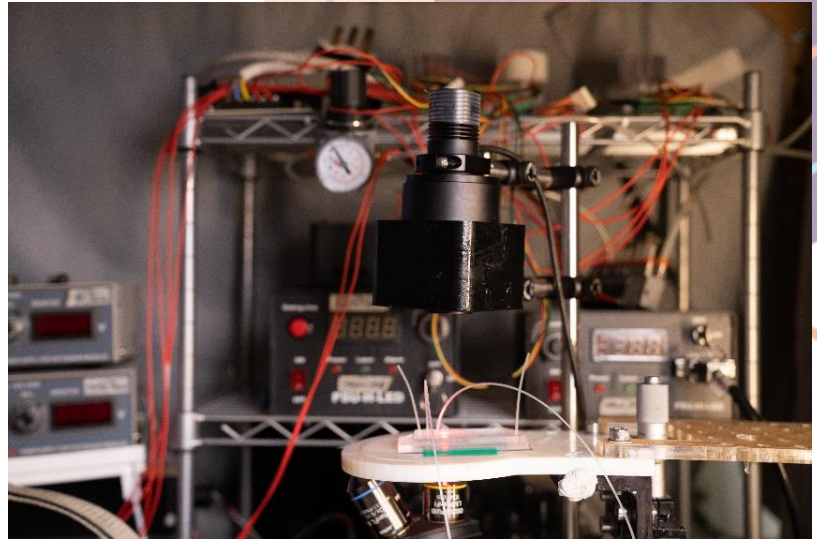
## Opportunistic COVID-19 airborne transmission with insufficient ventilation



In collaboration with the Guangdong CDC, Hunan CDC, Sun Yat-Sen University and Southeast University, Professor Yuguo Li and his team conducted a series of epidemiological and environmental studies on three important Covid-19 outbreak cases in Mainland China and Tokyo...[Read more](#)

## Proposal for airborne virus testing funded

The COVID-19 pandemic can be transmitted through respiratory droplets and contact. In particular, airborne transmission of the virus is becoming a critical factor in controlling future outbreaks. However, the study of the airborne virus remains limited...[Read more](#)



## HKU Engineering develops handy thermography fever detection system for public transportations



A multidisciplinary group of researchers led by Dr S.C. Fu, has recently explored a low-cost thermography fever detection system which is portable and can be easily accessed and mastered by users. ...[Read more](#)

## Novel silencer design by AA-Lab finds application in large-scale project

The laboratory for aerodynamics and acoustics (AA-Lab) at the department is one of the first three labs established at the HKU Zhejiang Institute of Research and Innovation (ZIRI) and is led by Professor Lixi Huang. Recently, a novel design of acoustic silencer (patent pending) has been delivered to its industrial partner ...[Read more](#)



杭州华电半山发电有限公司去工业化改造项目一期机力通风冷却塔改造工程

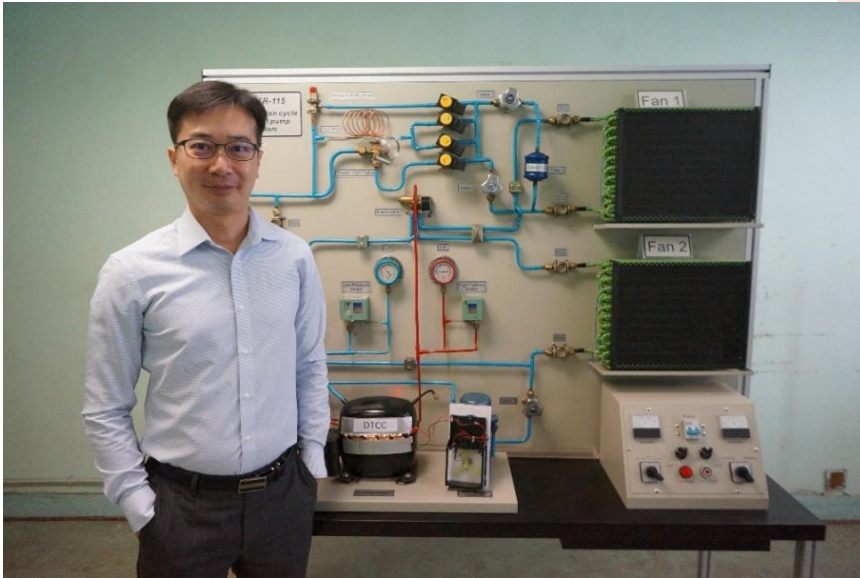
鸟瞰图

## HKU Engineering research team invents novel light-controlled contamination-free fluidic processor



HKU engineering research team has invented a novel light-controlled, contamination-free fluidic processor, which can serve as a useful tool to greatly reduce the risk of infection of front-line medical workers in testing virus or bacteria in big pandemics like the current COVID-19 pandemic...[Read more](#)

## Direct Thermal Charging Cell for Waste Heat to Electricity Conversion



In terms of the quality of knowledge, the project was an exciting and unique invention with enormous potential for practical applications in the longer term. Dr Shien Ping Tony FENG and team members (Dr Yu Ting HUANG, Miss Xun WANG, Miss Kaiyu MU, Miss Xinya WU, Mr Chunlin PANG) have partnered with esteemed academic institution, such as MIT, and produced high-quality research outputs. ...[Read more](#)

## HKU Team launches TSSSU@HKU-awarded spin-off company for MR-safe robotic actuation



Dr Ka Wai Kwok, and his team have launched the spin-off company, Momentus Robotics Limited, which provides solutions of high-performance robotic actuation for use within the magnetic resonance imaging (MRI) environment...[Read more](#)

## AWARDS

### Professor Alfonso Ngan receives the prestigious Guanghua Engineering Science and Technology Prize



Professor Alfonso Ngan, a distinguished academic in materials science and engineering has been named an awardee of the 13th Guanghua Engineering Science and Technology Prize by the Chinese Academy of Engineering ...[Read more](#)

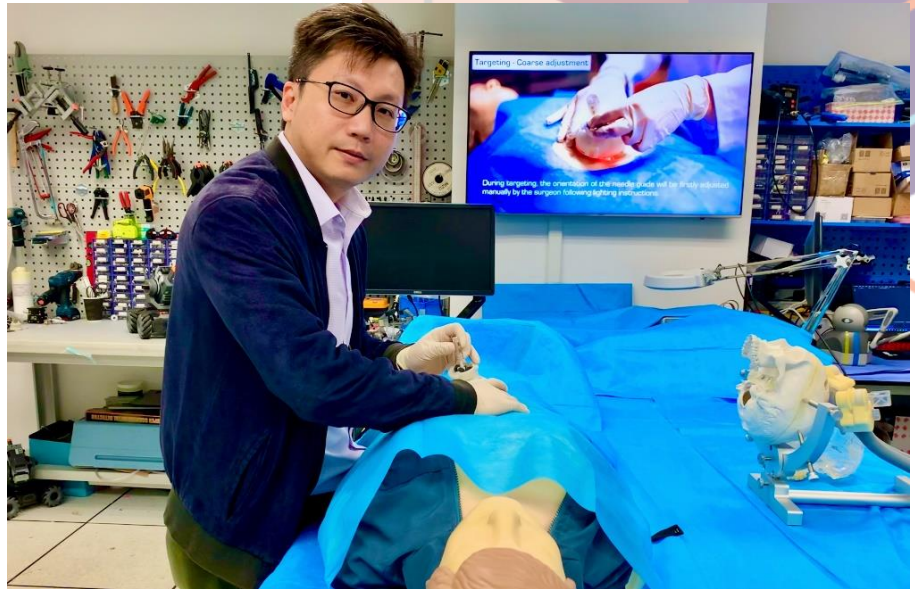
### Institution of Chemical Engineers Global Award 2020

Dr Shien-ping Tony Feng and his team have received IChemE Global Award 2020 for business start-up award (winner) and energy award (highly commended) regarding his research "Direct Thermal Charging Cell (DTCC)". Dr Feng's team was the few groups that won two awards this year...[Read more](#)



## Dr Ka-Wai Kwok receives Young Professional Award in robotics flagship conference, IROS

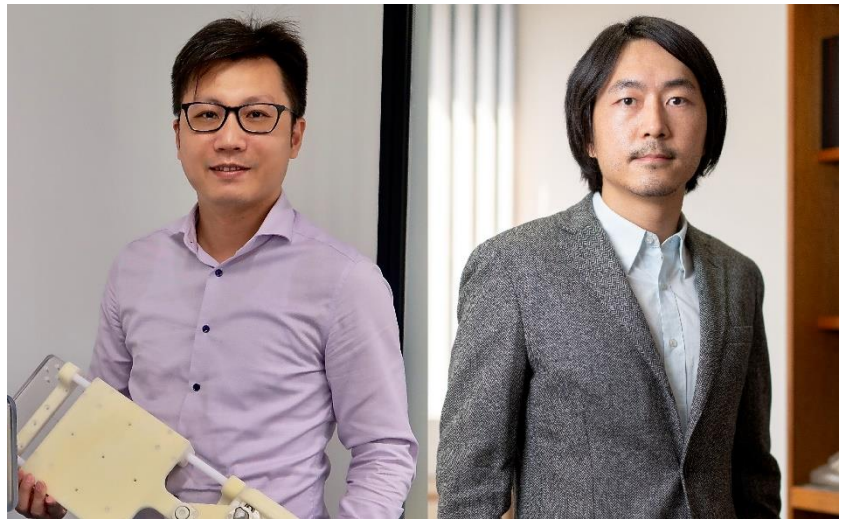
For Dr Ka-Wai Kwok's contributions to the advancement of magnetic resonance imaging (MRI) guided robotic systems, he recently receives IROS Toshio Fukuda Young Professional Award. This award honours ...[Read more](#)



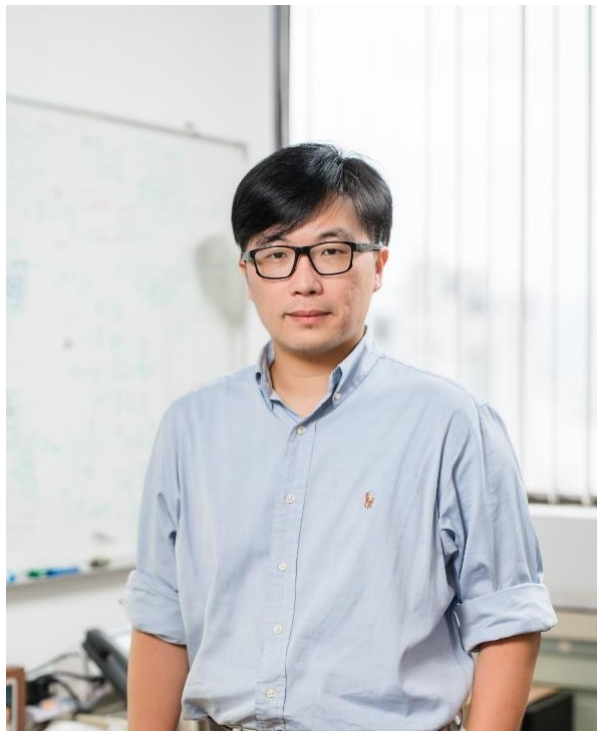
## HKU Outstanding Young Researcher Award (OYRA)

Congratulations to Dr Ka Wai Kwok and Dr Yue Chen in receiving "The Outstanding Young Research Award" (OYRA).

The Outstanding Young Researcher Award is set up by the University Research Committee to give recognition to young researchers for their extremely outstanding accomplishments in research." [Read more](#)



## Dr. Paddy Chan was selected as one of emerging investigators of Physical Chemistry Chemical Physics



Dr Paddy K.L. Chan was selected as one of the Emerging Investigators 2020 of Physical Chemistry Chemical Physics (PCCP) for making outstanding contributions to physical chemistry, chemical physics and biophysical chemistry and are the rising stars of these fields...[Read more](#)

## Four engineering academics named Highly Cited Researchers of 2020 by Clarivate Analytics

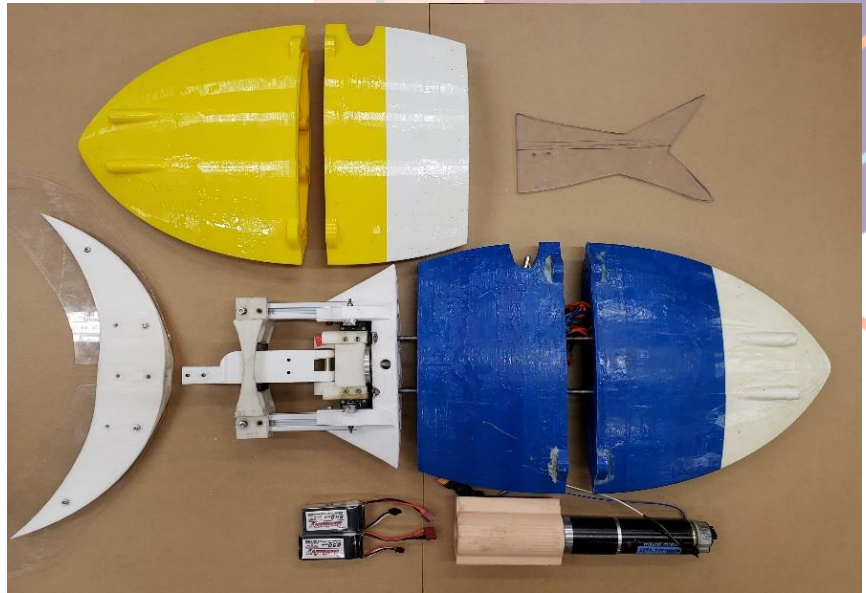
Among the thirteen academics of the University of Hong Kong being named "Highly Cited Researchers of 2020" by Clarivate Analytics, four of them are from Engineering. They are Professor James Lam and Professor Dennis Leung...[Read more](#)





## Guinness World Records Fastest Robot Fish

BREED Robotics Fish Project, a student team sponsored by the Tam Wing Fan Innovation Wing and the Department of Mechanical Engineering surpassed the previous Guinness World Record of 26.79 s , previously set by the Vayu Project for the “Fastest 50 m swim by a Robotic Fish”...[Read more](#)



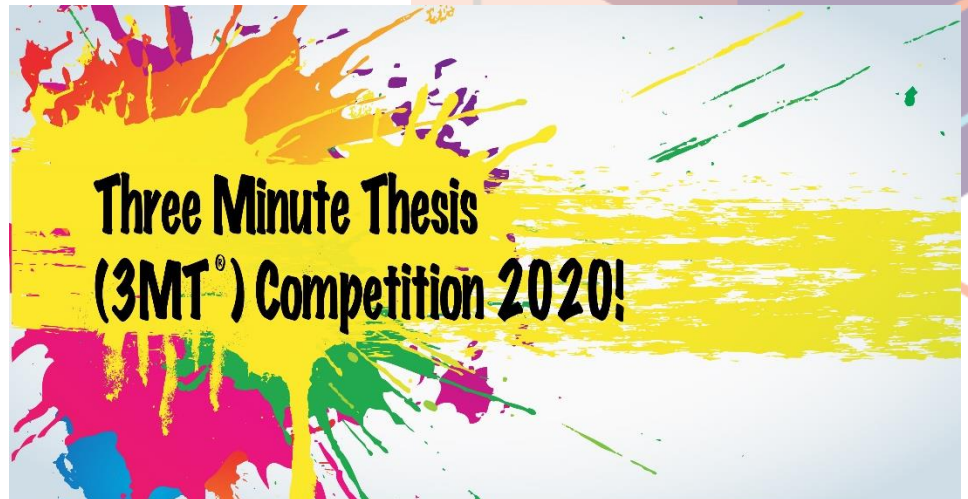
## HKU Startup and Teams Won Prizes at iCAN 2020

HKU start-up company High Performance Solution Limited was awarded Gold Medal, Top 10 Best Invention Awards, and the Special Award in 5th International Invention Innovation Competition in Canada (iCAN 2020). The team formed by Dr Shien-Ping Feng, Dr Vivian Huang, Ms. Xinya Wu, and Mr. Chunlin)...[Read more](#)

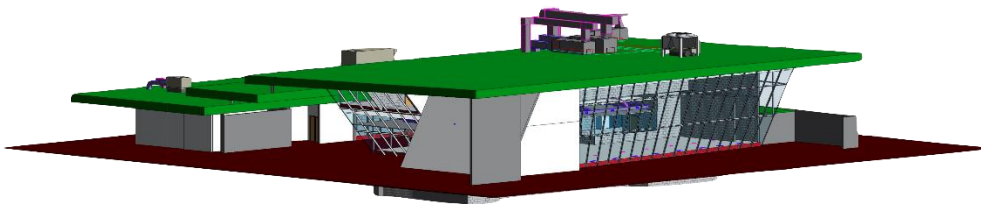


## Ms. Muyan Wu has got the Championship of the HKU Three Minute Thesis (3MT®) Competition

Ms. Melody Muyan Wu, PhD student of Prof. D.Y.C. Leung, has got the Championship of the HKU Three Minute Thesis (3MT®) Competition 2020 conducted on 23 June 2020. Her presentation thesis title is "An Efficient Way to Get Rid of Smells after Indoor Decoration"...[Read more](#)



## MECH students awarded second and third place in international HVAC Design Competition



A group of 5 mechanical engineering students were awarded 2nd place in the HVAC System Selection Category and 3rd place in the HVAC Design Calculations Category of the ASHRAE 2020 Student Design Competition...[Read more](#)

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