



College of Engineering

香港城市大學
City University of Hong Kong



Bright Future Engineering
Talent Hub

香港城市大學
City University of Hong Kong

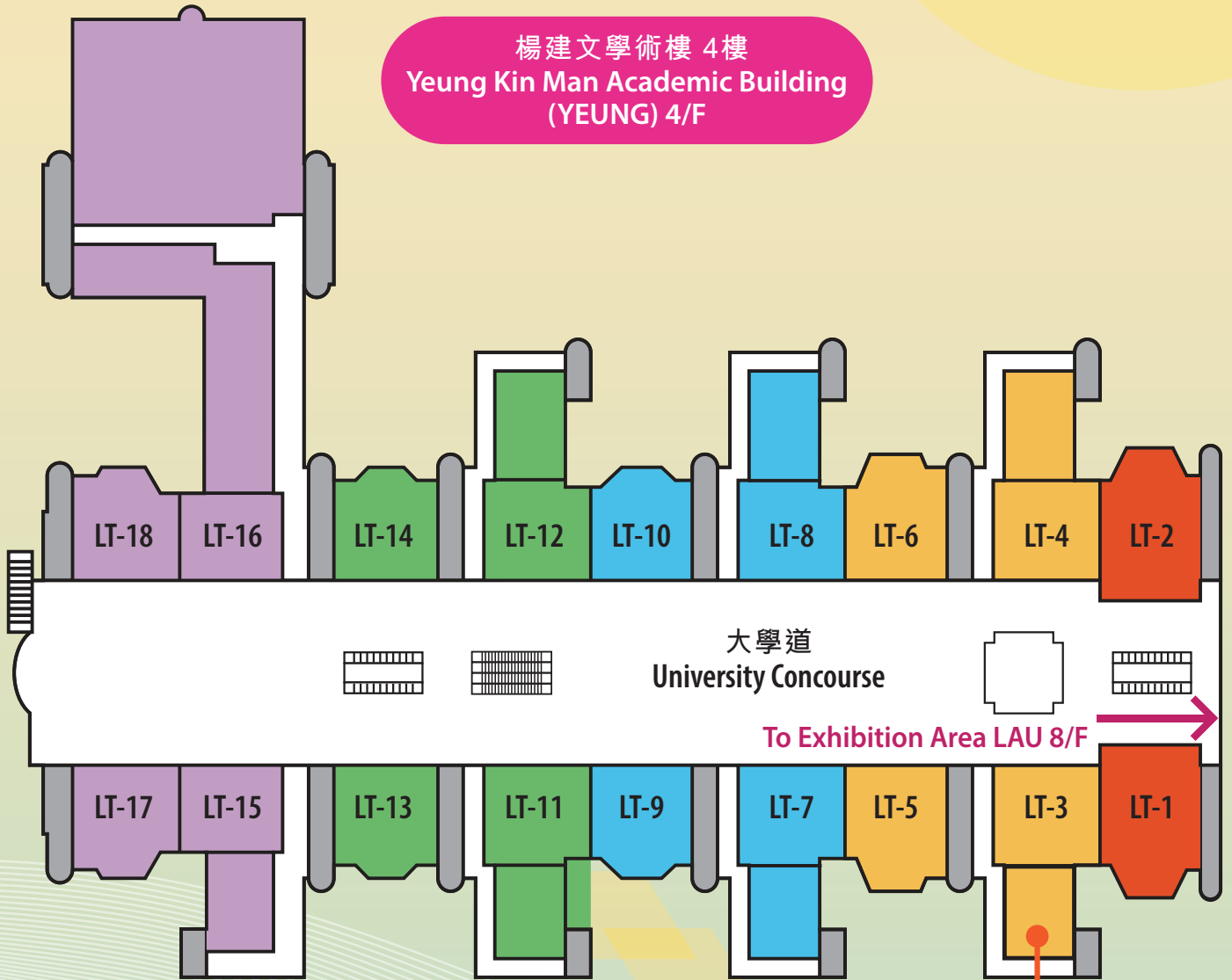
STEM

嘉年華暨學生專題研發展覽

Carnival cum Student Project Exhibition



楊建文學術樓 4樓
Yeung Kin Man Academic Building
(YEUNG) 4/F

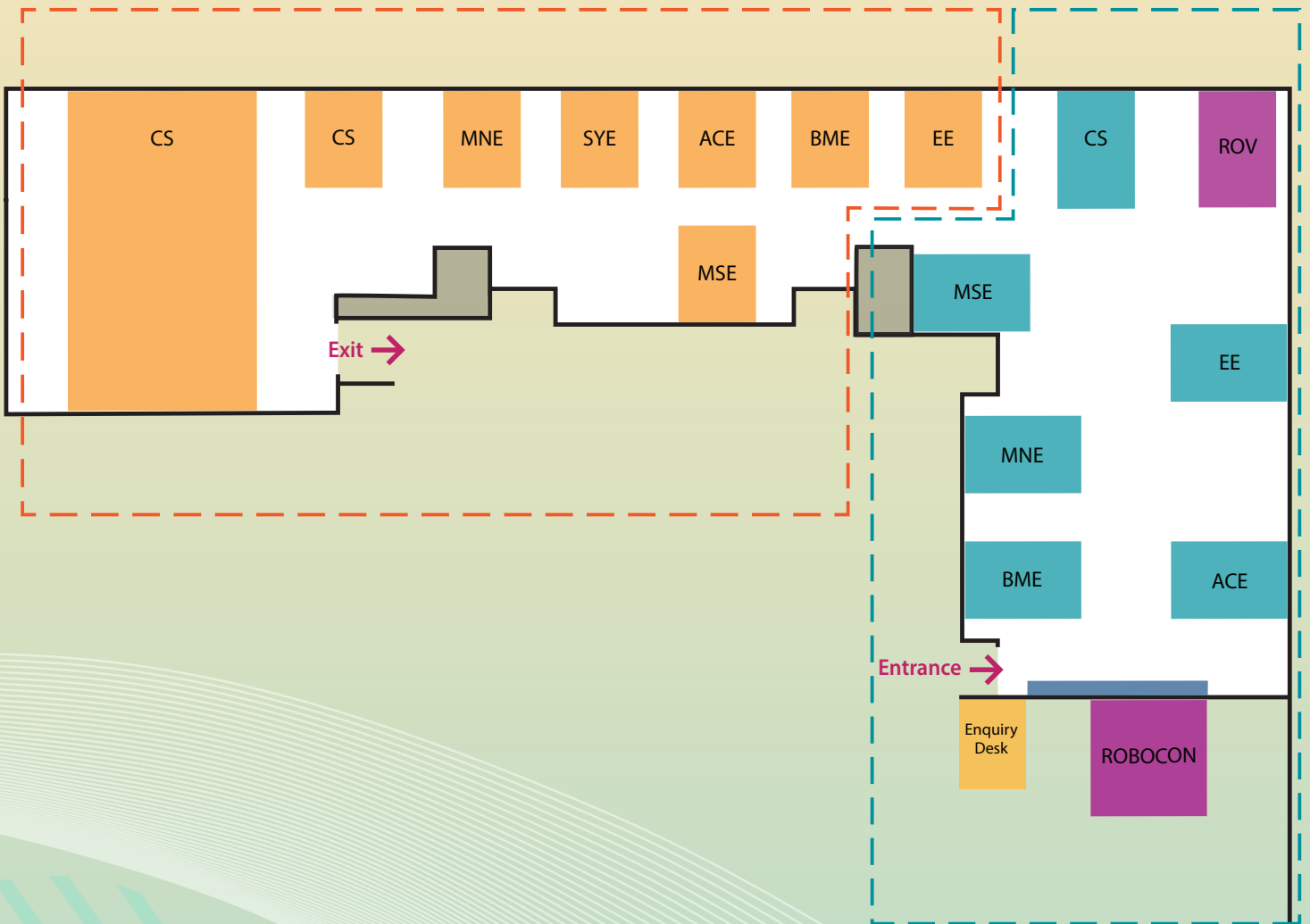


Registration Room
YEUNG Y4302

劉鳴焯學術樓 8樓
Lau Ming Wai Academic Building
(LAU) 8/F

Featured Projects Exhibition Area

Student Projects Exhibition Area



ACE

Department of Architecture and Civil Engineering

▶ Stacking Blocks into a Building

積木堆疊式的智慧建築法

Dr. KEUNG Chung Wai, Calvin 姜忠偉博士

MSE

Department of Materials Science and Engineering

▶ A Self-designed Compact Electron Microscope

自研發緊湊型電子顯微鏡

Prof. HSUEH Yu-Chun 薛又峻教授

BME

Department of Biomedical Engineering

▶ Advanced Magnetic Resonance Imaging (MRI)

for Imaging Abnormalities in Aging Brain

先進的磁力共振成像 (MRI)

有助提早檢測老化大腦的異常

Prof. CHAN Wai Yan, Kannie 陳葦恩教授

MNE

Department of Mechanical Engineering

▶ A Powerful Large-scale, Complex Environment

LiDAR Cloudsourcing Approach

大規模、複雜環境中的點雲眾包

Prof. YIN Peng, Max 殷鵬教授

CS

Department of Computer Science

▶ AI in Computer Science - AI Artist

電腦科學中的AI - AI藝術家

Prof. LIAO Jing 廖菁教授

▶ AI in Computer Science - AI Chatbot

電腦科學中的AI - AI聊天機器人

Prof. SONG Linqi 宋林琦教授

▶ AI in Computer Science - Autonomous Driving Racing Car

電腦科學中的AI - 自動駕駛競賽車

Dr. CHEN Xinhong 陳欣鴻博士

SYE

Department of Systems Engineering

▶ Schlieren Imaging for Seeing the 'Invisible' Acoustic Waves

紋影成像技術觀察「看不見的」聲波

Prof. DU Xiaohan 杜肖晗教授

▶ Hybrid Artificial Intelligence for Real-World Energy and Manufacturing Applications

用於現實世界能源和製造應用的混合人工智慧

Prof. CHU Yinghao 褚英昊教授

EE

Department of Electrical Engineering

▶ Do You See What I see?

你能觀察到我所看到的事物嗎?

Prof. BASU Arindam

ROBOCON

▶ CityU Robocon Team

城大機械人隊

ROV

▶ CityU Underwater Robotics

城大海底機械人

ACE

Department of Architecture and Civil Engineering

▶ **Wind Energy Assessment in Hong Kong**

香港風力資源評估

Student

GUO Yishu

郭禕樹

Supervisor

Prof. LI Qiusheng

李秋勝教授

▶ **Metro Station and Rail Villages:**

Case Studies of Ngau Tau Kok and Kowloon Bay Stations

以牛頭角和九龍灣地鐵站的案例分析

探討鐵路站對周遭社區的影響

Student

YU Tsz Ki

余芷琦

Supervisor

Prof. XUE Qiuli, Charlie

薛求理教授

▶ **Study on the Current Industrial Building Development in Eastern Kowloon and the Future Prospect**

九龍東的工業大廈發展現況及未來展望研究

Student

CHOW Hon Chun

周瀚臻

Supervisor

Dr. YEUNG Kam Lan, Daisy

楊金蘭博士

BME

Department of Biomedical Engineering

▶ **Design and Development of an AI-enabled Assistive Device for Screening of Mild Cognitive Impairment (MCI)**

借助人工智能，設計和製造一個輕度認知功能障礙的篩查工具

Students

LEUNG Chung Yan

梁頌恩

WONG Ka Hei

黃嘉希

KO Yu Fei

高宇飛

Supervisor

Prof. CHEN Ting Hsuan

陳定璿教授

▶ **Non-invasive Blood Glucose Monitor Using Photoplethysmography**

非侵入性血糖監測儀

Students

YANG Shing Chun

楊承臻

LEUNG Hin Wai

梁軒尉

IP Chun Wang

葉俊宏

TSE Chin Wang

謝展宏

Supervisors

Prof. CHAN Wai Yan, Kannie

陳葦恩教授

Prof. BALACHANDRAN Yekkuni Lakshmanan

CS

Department of Computer Science

▶ One-click Job Application

Students

TOKTONAZAR UULU Nuraaly
ZHENISHBEK UULU Talantbek

Supervisor

Prof. CHAN Antoni, Bert 陳萬師教授

MSE

Department of Materials Science and Engineering

▶ On The Study on Charge Carrier Recombination in Organic Solar Cell Materials

對有機太陽能電池電荷損失的研究

Student

MAHADEVAN Sudhi

Supervisor

Prof. TSANG Sai Wing 曾世榮教授

EE

Department of Electrical Engineering

▶ Walking Muscle Synergies Analysis

步行肌肉協同的分析

Student

LAU Tsz Him 劉梓謙

Supervisor

Prof. CHAN Ho Man 陳皓敏教授

▶ Adaptive Gate-Source Voltage for Tackling Spurious Pulses in SIC-MOSFET-Powered-Converters

解決 SIC-MOSFET 供電轉換器中的
雜散脈衝的自適應閘源電壓

Student

CHAN Chak Kan 陳澤勤

Supervisor

Prof. CHUNG Shu Hung, Henry 鍾樹鴻教授

MNE

Department of Mechanical Engineering

▶ Developing a Membrane-based Seawater Electrolyser for Hydrogen Generation

用於海水制氫的膜基電解槽的研究

Students

SUN Chin Wai 申展威
KAM Sin Yeung 甘善揚
CAI Xinyi 蔡欣宜

Supervisor

Prof. LI Weihong 李威宏教授

▶ Experimental Study of Hybrid Groove Structure on Condensation Heat Transfer Enhancement

親疏水溝槽結構冷凝熱傳研究

Student

TSOI Tsz Ming 蔡子銘

Supervisor

Prof. ZHAO Jiyun 趙吉運教授

STEM Workshops

3 Jul (Wed)	10:30 – 12:00	Industry 4.0 工業 4.0	Prof. CHOW Andy 周浩輝教授
	14:00 – 16:30	3D Printing Workshop (3D Polymeric Models) 3D打印工作坊(3D 聚合物模型)	Prof. CHUNG Chi Yuen 鍾志源教授
	14:30 – 16:30	Applying Character Strengths Model to Enhance Performance and Teamwork in STEM Education 品格優勢如何提升STEM教育中的團隊合作和成效	Mr. TSANG Man Yiu 曾文堯先生
	14:00 – 17:00	Robotics Workshop 機器人工作坊	Prof. LUO Xiaowei 駱曉偉教授
		Biomedical Properties of Human Hair and Bone 從生物醫學角度看人體頭髮及骨頭的機械特性	Dr. YEUNG Wai Hang, Ricky 楊偉恒博士
	14:30 – 17:00	3D Printing Workshop 3D打印工作坊	Dr. LUK Bing Lam 陸炳林博士
	15:00 – 16:00	Tinkercad Design Workshop Tinkercad設計工作坊	Prof. CHEUNG Chak Chung, Ray 張澤松教授
4 Jul (Thu)	09:30 – 12:30	Know the Basic of Micro Fabrication 認識微製造的基礎方法及在生物醫學上的重要性	Dr. YEUNG Wai Hang, Ricky 楊偉恒博士
	10:30 – 13:00	3D Printing Workshop 3D打印工作坊	Dr. LUK Bing Lam 陸炳林博士
	14:00 – 15:30	DIVE into Deep Learning 趣味探索深度學習	Prof. CHAN Chung 陳聰教授
	14:00 – 16:30	Rechargeable Battery DIY Workshop 充電電池DIY工作坊	Prof. CHUNG Chi Yuen 鍾志源教授
	14:30 – 15:45	Implementing Virtual Design and Construction by Using Building Information Modelling Technology 利用建築資訊建模技術實現虛擬設計與施工工作坊	Dr. KEUNG Chung Wai, Calvin 姜忠偉博士
	15:00 – 16:00	Tinkercad Design Workshop Tinkercad設計工作坊	Prof. CHEUNG Chak Chung, Ray 張澤松教授
	15:00 – 17:00	3-D Computer Simulation 三維電腦模擬	Dr. LIU King Pui, Louis 廖境培博士
5 Jul (Fri)	09:30 – 12:30	Understanding and Measuring Muscle Force from Surface Electromyography (EMG) 了解表面肌電圖及其醫學應用	Dr. YEUNG Wai Hang, Ricky 楊偉恒博士
	10:30 – 12:30	First Attempt in Learning (FAIL): Discover Your Potentials from Failure 從失敗中學習：發掘更多個人潛質	Mr. KWOK Kai Chun, Remus 郭啟晉先生
	14:00 – 16:30	Polymer Cubes: Billions-Years Minerals Encapsulated 礦石晶體與聚合物模型	Prof. HE Qiyuan 何其遠教授
	14:30 – 15:15	The Recycling of Waste and the Application of Carbon Capture in Concrete Production 廢棄物回收和碳捕獲在混凝土生產上的應用	Prof. XIAN Xiangping 冼向平教授

Guided Laboratory Tours

3 Jul (Wed)	13:15 – 13:45	CLP Power Low Carbon Energy Education Centre 中華電力低碳能源教育中心	Dr. LUK Bing Lam 陸炳林博士
	16:15 – 16:45	CLP Power Low Carbon Energy Education Centre 中華電力低碳能源教育中心	Dr. LUK Bing Lam 陸炳林博士
4 Jul (Thu)	10:30 – 11:00	CLP Power Low Carbon Energy Education Centre 中華電力低碳能源教育中心	Dr. LUK Bing Lam 陸炳林博士
	11:30 – 12:00	CLP Power Low Carbon Energy Education Centre 中華電力低碳能源教育中心	Dr. LUK Bing Lam 陸炳林博士
	14:00 – 15:00	BME Teaching Laboratories and Facilities BME教學實驗室及設備	Dr. YEUNG Wai Hang, Ricky 楊偉恒博士
	14:30 – 15:00	Optoelectronics, Electronics, Nanotechnology and Biosystems Laboratory 光電子、電子、納米技術及生物系統實驗室	Dr. WONG Wing Han, Polis 黃詠嫻博士
	15:30 – 16:00	Optoelectronics, Electronics, Nanotechnology and Biosystems Laboratory 光電子、電子、納米技術及生物系統實驗室	Dr. WONG Wing Han, Polis 黃詠嫻博士
	16:00 – 17:00	Built-informatics and Smart Cities Cluster 建設信息及智慧城市集群	Dr. KEUNG Chung Wai, Calvin 姜忠偉博士
		BME Teaching Laboratories and Facilities BME教學實驗室及設備	Dr. YEUNG Wai Hang, Ricky 楊偉恒博士
	16:30 – 17:00	Optoelectronics, Electronics, Nanotechnology and Biosystems Laboratory 光電子、電子、納米技術及生物系統實驗室	Dr. WONG Wing Han, Polis 黃詠嫻博士
5 Jul (Fri)	10:30 – 11:00	Time-Resolved Aberration Corrected Environmental (TRACE) Electron Microscope Unit 高時空分辨TRACE電鏡中心	Mr. HUNG Tak Fu 熊德富先生
		CLP Power Low Carbon Energy Education Centre 中華電力低碳能源教育中心	Dr. LUK Bing Lam 陸炳林博士
	11:30 – 12:00	CLP Power Low Carbon Energy Education Centre 中華電力低碳能源教育中心	Dr. LUK Bing Lam 陸炳林博士
		Time-Resolved Aberration Corrected Environmental (TRACE) Electron Microscope Unit 高時空分辨TRACE電鏡中心	Mr. HUNG Tak Fu 熊德富先生
	13:30 – 14:30	BME Teaching Laboratories and Facilities BME教學實驗室及設備	Dr. YEUNG Wai Hang, Ricky 楊偉恒博士
	14:15 – 14:45	Multidisciplinary Projects Laboratory 多學科習作實驗室	Prof. CHAN Hau Ping, Andy 陳孝平教授
	14:30 – 15:00	Time-Resolved Aberration Corrected Environmental (TRACE) Electron Microscope Unit 高時空分辨TRACE電鏡中心	Mr. HUNG Tak Fu 熊德富先生
	15:30 – 16:00	Time-Resolved Aberration Corrected Environmental (TRACE) Electron Microscope Unit 高時空分辨TRACE電鏡中心	Mr. HUNG Tak Fu 熊德富先生
	16:00 – 17:00	Built-informatics and Smart Cities Cluster 建設信息及智慧城市集群	Dr. KEUNG Chung Wai, Calvin 姜忠偉博士

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