

Extended learning activities for STEM Education
Workshop on “Smart Living through the use of IoT Technology”
STEM 教育延伸學習活動：「善用物聯網技術·體驗智慧生活」工作坊

Date 日期 : 12/4/2022 (Tuesday/星期二)、13/4/2022 (Wednesday/星期三)、14/4/2022 (Thursday/星期四)
Time 時間 : 10:00 – 11:30
Venue 地點 : Online mode via Zoom*
 透過 Zoom 以網上模式進行*

12/4/2022 (Tuesday/星期二)

Time 時間	Content/Activity 內容/活動	Speaker 講者
10:00 – 10:15	Introduction to the Internet of Things (IoT), its application and how it works 簡介物聯網 (IoT)、其應用及運作方式	
10:15 – 11:25	<ol style="list-style-type: none"> Hands-on activity <ul style="list-style-type: none"> Set up an IoT messenger using an online platform Use the messenger to control a switch shown on the speaker’s computer screen Explain the set-up steps above and the purposes they serve <ol style="list-style-type: none"> 動手實踐活動 <ul style="list-style-type: none"> 利用網上平台設置一個物聯網訊息發送器 使用訊息發送器控制講者電腦屏幕上顯示的開關掣 講解以上所作設置步驟及其作用 	Project Manager of STEM Education Centre STEM 教育中心項目經理
11:25 – 11:30	Q&A 問與答	

13/4/2022 (Wednesday/星期三)

Time 時間	Content/Activity 內容/活動	Speaker 講者
10:00 – 10:20	<p>Understanding the bridge to data transfer - An introduction to the MQTT (Message Queueing Telemetry Transport) protocol 認識資料傳遞的橋梁 - 簡介 MQTT (訊息佇列遙測傳輸) 協議</p>	
10:20 – 11:25	<p>1. Hands-on activity 1 • Download a mobile app to carry out the activity # • Publish and subscribe messages using the downloaded mobile app</p> <p>2. Hands-on activity 2 • Participants receive messages of the current temperature and relative humidity at the speaker's location • Participants receive an alert when the temperature or relative humidity exceeds the set values</p> <p>3. Hands-on activity 3 • Participants control a robot at the STEM Education Centre by sending messages to it</p> <p>1. 動手實踐活動 1 • 下載手機應用程式進行活動# • 使用下載的手機應用程式進行發佈和訂閱訊息</p> <p>2. 動手實踐活動 2 • 參與者接收講者位置的當前溫度及相對濕度訊息 • 當溫度或相對濕度高出指定值時，參與者會接收到警報</p> <p>3. 動手實踐活動 3 • 參與者傳送訊息控制STEM教育中心的機械人</p>	<p>Project Manager of STEM Education Centre STEM 教育中心項目經理</p>
11:25 – 11:30	Q&A 問與答	

14/4/2022 (Thursday/星期四)

Time 時間	Content/Activity 內容/活動	Speaker 講者
10:00 – 10:10	Recap key points learned in the previous two sessions 回顧前兩節所學的重點	
10:10 – 11:25	<ol style="list-style-type: none">Hands-on activity<ul style="list-style-type: none">Using an online platform to compose IoT programsPerform program test by sending a message to change the colour of a light sourceUse the created program to collect participants' preferences <ol style="list-style-type: none">動手實踐活動<ul style="list-style-type: none">利用網上平台編寫物聯網程式通過發送訊息更改光源顏色來執行程式測試利用所編程式收集參與者意願	Project Manager of STEM Education Centre STEM 教育中心項目經理
11:25 – 11:30	Q&A 問與答	

* Zoom online lesson information will be sent by email
Zoom 網上課堂資料會以電郵另行通知

Participants are required to install an app (to be introduced in Session 1) on their mobile phone before Session 2
參加者須於節次 2 前在手機安裝一個應用程式 (將在節次 1 中簡介)