



樂器

設計比賽

Musical Instrument

Design Competition

<http://i.cs.hku.hk/~music/>

Competition Briefing

比賽簡介

Dr. WONG Ka Yan [Ivy]

Faculty of Engineering, HKU

香港大學工程學院 王嘉欣博士

主辦
Organizers



Faculty of Engineering
THE UNIVERSITY OF HONG KONG



藝術與科技教育中心
Arts & Technology Education Centre

支持單位
Supporting
Organizations



香港電腦教育學會
The Hong Kong Association
for Computer Education



香港教育城
HkedCity

資助
Funding
Support



The University of Hong Kong
Knowledge Exchange

Organizer

主辦單位



- Faculty of Engineering, The University of Hong Kong
香港大學工程學院
<http://engg.hku.hk>
- Arts & Technology Education Centre
藝術與科技教育中心
<http://www.atec.edu.hk>



Faculty of Engineering
THE UNIVERSITY OF HONG KONG



藝術與科技教育中心
Arts & Technology Education Centre

Supporting Organizations / Individuals

支持單位



- Hong Kong Association of Computer Education (HKACE)

香港電腦教育學會

<https://www.hkace.org.hk>



- HKEdCity 香港教育城

<https://www.hkedcity.net>



- Dr. TSANG Yik Man Edmond 曾奕文博士
Composer and musician 作曲家及音樂家

- Mr. FUNG Bing Fai Makin 馮炳輝先生

Musician, video and multimedia artist 音樂、錄像及多媒體藝術家

- *Funding Supported by* HKU Knowledge Exchange Fund

香港大學知識交流基金資助

<http://www.ke.hku.hk>



The University of Hong Kong
Knowledge Exchange

Objectives 目的



- Sparking student's and public interest in STEAM (A for Arts) and integration of technologies
燃點學生與公眾對STEAM (A代表藝術) 教育和科技整合的興趣
- Strengthening participants' abilities to integrate and apply knowledge and skills in engineering
加強參加者整合和利用工程技術的能力
- Nurturing their creativity, problem solving and communication skills and enhancing their appreciation of science and mathematics of sound and music
培養參加者的創意、解難能力和溝通能力，更加強他們對聲與樂的認知與欣賞

Categories 參賽組別



- Primary school 小學組
- Secondary school 中學組

Rules & Requirements 比賽規則及作品要求



- **A musical instrument:** A piece of work that is capable of producing sound, and used as a musical instrument
樂器：一台可發聲及作樂器之用的裝置
- **Report:** Background information, documentation on design, implementation and operation of the instrument, circuits and software (if applicable), testing and results, etc
文字報告：背景資料、裝置的設計、電路圖（如適用）、軟件設計（如適用）、操作方法等資料
- **Photos:** Photos of the instrument (No more than 10 photos)
作品相片：用以介紹作品的相片（不多於十張）
- **Performance:** Play the implemented musical instrument(s) in a live performance arranged by the organisers
表演：利用製作的樂器在作品演奏會中進行表演
- **Exhibition:** Present and demonstrate the work in the exhibition arranged by the organisers
展覽：出席作品展覽介紹作品

Requirements 作品要求 R-01



- R-01 The piece of work should be capable of producing sound, and used as a musical instrument. There is no restriction on the choices of materials for the instrument. The cost for the design and fabrication of the instrument, excluding desktop/notebook computers, tablets or mobile phone, should be less than **HKD 2000**. There will be **no subsidy from organisers** for implementing the instrument.

製造樂器的材料並沒有限制，所需費用應少於港幣2000元（電腦、平板電腦、手提電話等設備等除外）。主辦單位並不會給予金錢上的補助。

Requirements 作品要求 R-02



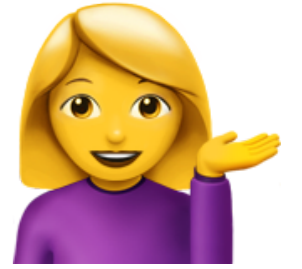
- R-02 The report should be concise, preferably with a length of **no more than 10 pages** (cover page excluded, diagrams included) and in **PDF** format.
文字報告宜言簡意賅，**不可多於十頁**（包括圖表,不包括封面頁）。隊伍需要提交**PDF格式**的報告。

Requirements 作品要求 R-03 R-04



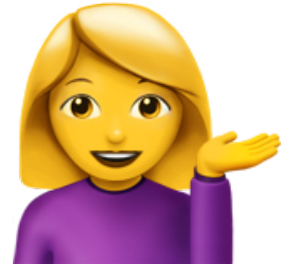
- R-03 **Digital photos of the instrument** should be delivered (in **zip** format), together with the report, before the deadline of submission.
提交報告時亦需提交**參賽作品之照片**，請將照片儲存在 **zip** 檔案提交。
- R-04 Report and photos should be submitted through a specific submission website on or **before the submission deadline**, otherwise it will not be entertained.
文字報告及相片 zip 檔需於**限期前**提交到指定網頁。

Requirements 作品要求 R-05



- R-05 Each team is required to give a live performance using the implemented musical instrument. The **length of the performance should be no more than 90 seconds**. The performance can include other musical instruments. The piece can be original, an existing musical piece, or a variation of it. The title and length of the piece should be submitted to the organiser before a deadline specified by the organisers. 參賽隊伍須利用製作的樂器在作品演奏會中進行**不多於 90 秒的表演**。除了隊伍製作的樂器外，可配合其他樂器進行演奏。演奏曲目可是原創、現有或改編的音樂作品。作品的標題及長度須於指定日期前提交給主辦機構。

Requirements 作品要求 R-06



- R-06 Each team is required to attend the event "Concert and Project Exhibition". Judging will be done during the Concert and the Exhibition. In the **whole period of the exhibition, at least one** team member (i.e., not counting teacher advisor(s)) must be present. Team members are expected to answer questions raised by the judges and visitors.

參賽隊伍須出席作品展覽。展覽當天將進行評審，**展覽期間**參賽隊伍須派**至少一位**隊員（不包括督導老師）介紹作品，並回答評判及參觀人士的提問。

Judging Criteria 評審準則

- J-01 **Research 報告內容**
Content of report, design, implementation and testing methodologies.
報告內容、設計、製作及測試方法。
- J-02 **Innovation 創意**
How innovative ideas have been applied in the design and implementation of the musical instrument.
設計及製作樂器的創意。
- J-03 **Appearance 外觀**
Does the musical instrument look good?
樂器的外觀。
- J-04 **Performance 表演**
Performance in the Concert.
參賽隊伍的在演奏會的演出。
- J-05 **Presentation 介紹技巧**
Performance in the project exhibition.
參賽隊伍的介紹技巧。

Awards 獎項



- Champion 冠軍
- First runner-up 亞軍
- Second runner-up 季軍
- The Most Innovative Musical Instrument Award 最佳創意獎
- The Most Attractive Musical Instrument Award 最優外觀獎
- The Best Presentation Award 最佳演繹獎
- Outstanding Performance Award — Champion 優秀表演獎 — 冠軍
- Outstanding Performance Award — First runner-up 優秀表演獎 — 亞軍
- Outstanding Performance Award — Second runner-up 優秀表演獎 — 季軍
- My Favourite Musical Instrument Award 我最喜愛的樂器
- Participants' Favourite Musical Instrument Award 隊伍最喜愛的樂器
- Certificate of Participation 參與證書



Certificate of Participation 參與證書

- Certificate of Participation will be presented to each member of the team if the team has:
 - submitted the report before the deadline;
 - perform on stage with the implemented musical instrument; and
 - attended the exhibition (at least one member of the team) with the designed device.
- 符合以下要求的隊伍，其隊員皆可獲頒參與證書一張：
 - 於限期前提交作品報告；
 - 在作品演奏會中進行表演；及
 - 出席作品展覽並介紹作品。

Certificate of Attendance 出席證書



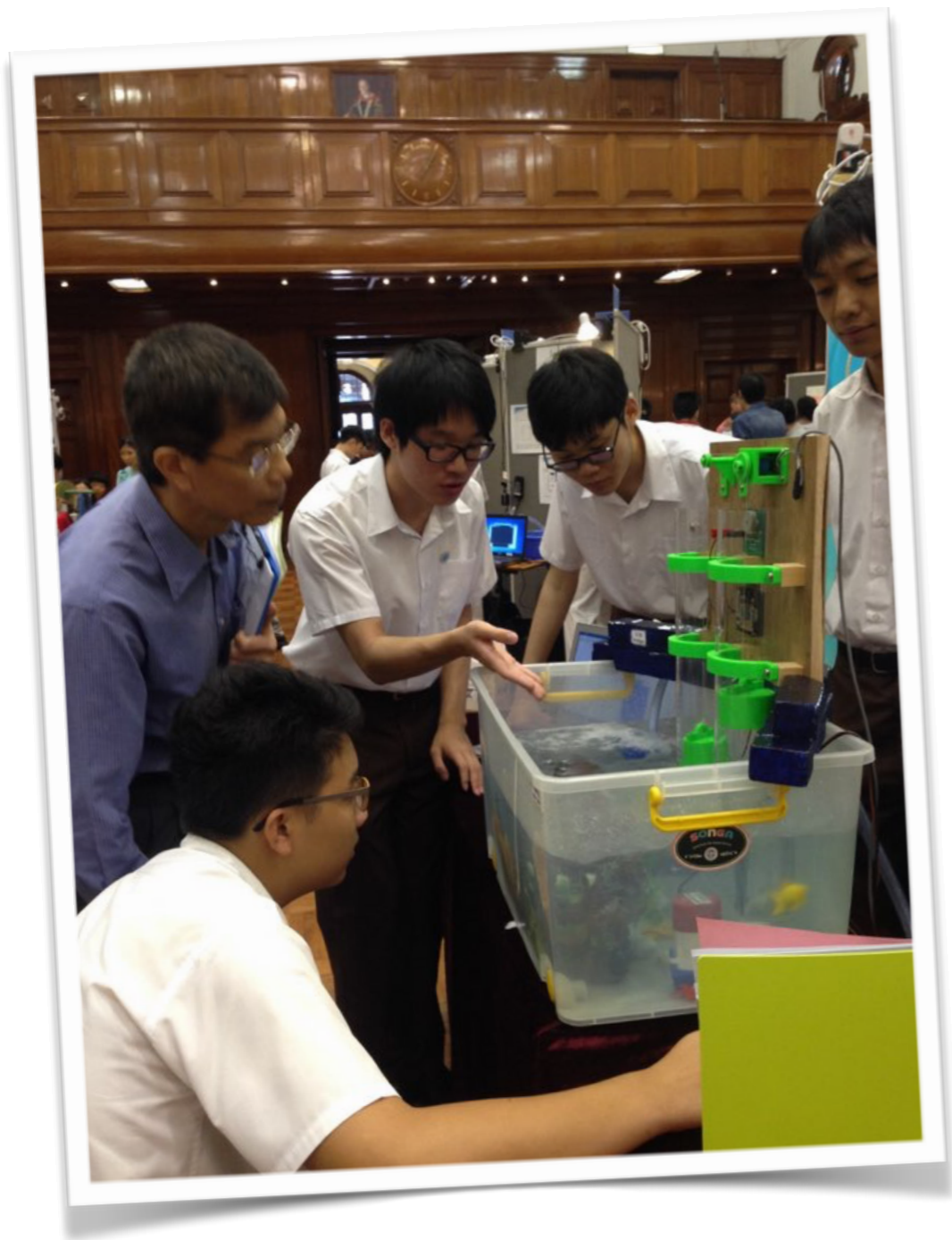
- Certificate of Attendance will be presented to participants if:
 - his/her team is eligible for receiving the “Certificate of Participation”; and
 - attended the corresponding event.
- 符合以下要求的參加者可獲頒該活動的出席證書：
 - 符合獲頒「參與證書」的要求及
 - 曾出席該活動。

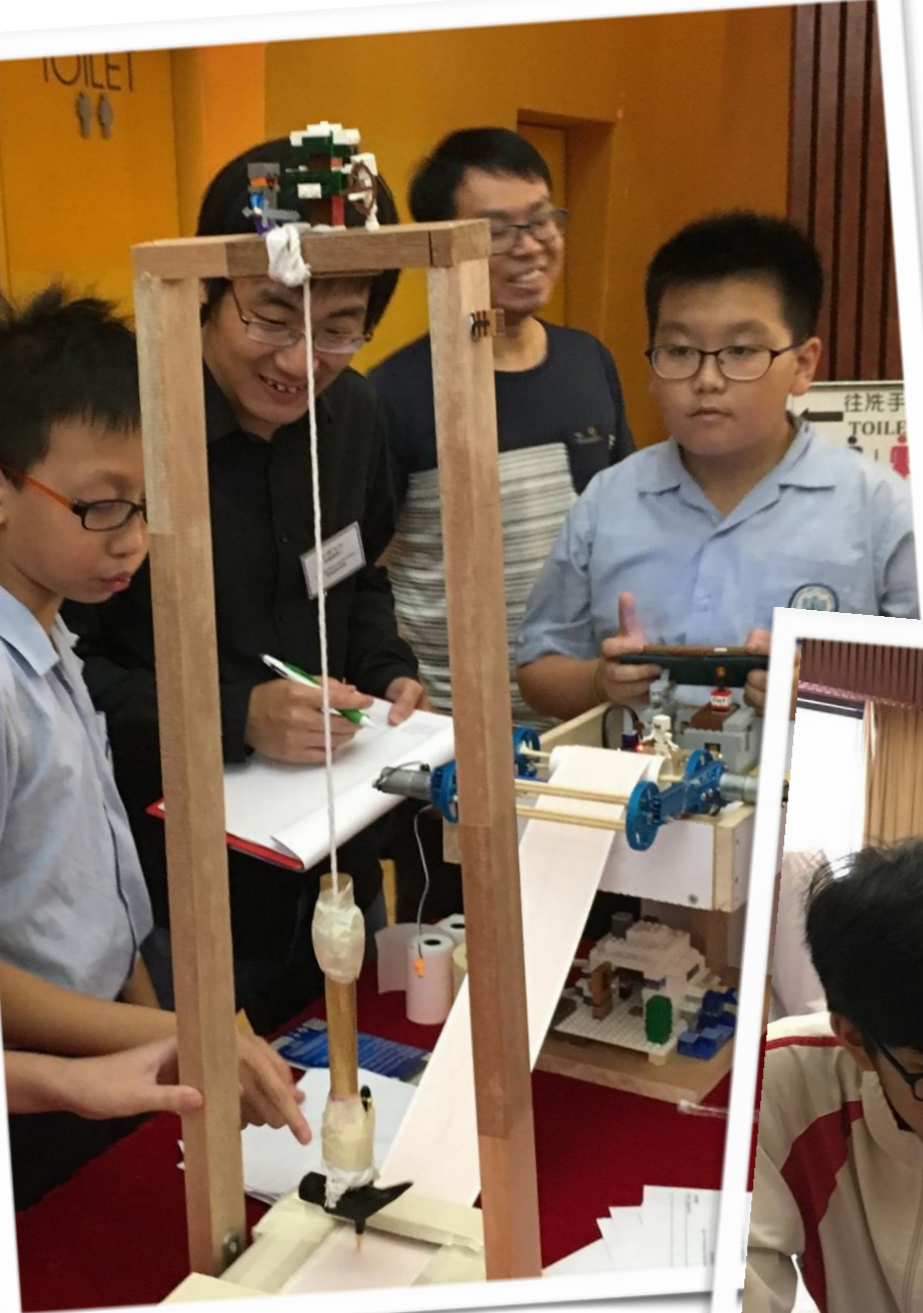
Concert, Project Exhibition, Judging and Award Presentation

演奏會、作品展覽、評審及頒獎典禮



- 2019-05-04[Sat] / 2019-05-11[Sat] (Tentative 暫定) 09:30-17:30
- All the teams are required to perform on stage with their implemented musical instrument. The team are then required to present and demonstrate their work during the Exhibition after the Concert.
所有參賽隊伍必須利用製作的樂器在作品演奏會中進行表演，並於演奏會後出席作品展覽介紹作品。
- Judging will be done during both the Concert in the morning and the Exhibition.
評審將於上午演奏會及作品展覽中進行。
- The results will be announced in the afternoon, and then awards will be presented.
比賽結果將於下午作品展覽完結前公布，並頒發獎項。
- Open to the public. Parents, teachers and students are welcome.
演奏會及作品展覽將開放給公眾參觀，歡迎家長、同學出席。
- All visitors can vote for the "My Favourite Musical Instrument" Award.
入場人士將投票選出「我最喜愛的樂器」的得獎隊伍。
- All participants are also required to vote for the "Participants' Favourite Musical Instrument" Award winner.
參賽隊伍亦會進行互評投票選出「隊伍最喜愛的樂器」的得獎隊伍。
- At least one team member of the group must attend the exhibition.
展覽期間參賽隊伍需派至少一位隊員介紹作品。





Eligibility to join the Concert & Project Exhibition

出席演奏會及作品展覽資格



- All participating teams are required to submit “**Intention to submit form**” on or before **2019-04-01 [Mon]**:
參賽隊伍需於 **2019-04-01 [Mon]** 或之前提交「**作品提交意向表格**」：
 - Estimated size of the final deliverable (length × width × height) cm
作品的估計尺寸 (長 × 闊 × 高) 厘米
 - The title and length of the piece to be performed 演奏曲目的名稱及長度
 - A photo of the musical instrument (can be incomplete)
一張作品相片 (可以是未完成的)
- Method of submission 提交方法：
The URL of the online "Intention to submit" form will be announced later.
「作品提交意向表格」網頁將於稍後公佈。
- The organizer will arrange the Concert & Project Exhibition according to the submitted information. The team will **not be eligible** to join the event if the team have not submitted the required information before the deadline.
主辦單位會根據上述資料作出演奏會及作品展覽安排，如未能於限期前提交資料則**不能獲得演出及作品展覽資格**。



Submission of report 提交作品文字報告

- Report 文字報告 (PDF format 格式)
- Photos of the submission in zip format
作品照片 (儲存於 zip 檔案)
- Deliverable submission form 提交作品表格
- Submission of report Deadline 提交作品文字報告限期：
2019-04-23[Tue] 17:00
- Method of submission 提交方法：Submission site 網頁
The URL of the online submission site will be announced later.
「提交作品」網頁將於稍後公佈。

Submission 提交作品



- All participating teams are required submit the musical instrument on the date of Concert & Project Exhibition.
參賽隊伍需於演奏會及作品展覽當天提交作品。
- 2019-05-04[Sat] / 2019-05-11[Sat] (Tentative 暫定)
09:30-17:30



Upcoming events 活動預告

- **2018-11-03[Sat]**
 - Experience Sharing Session
by Dr. Tsang Yik Man Edmond (Musician and Composer)
曾奕文博士（作曲家、音樂家） 分享
 - Talk on "Sound, Music and Science"
「聲與樂的科學」 講座
 - Introduction to ATEC
藝術與科技教育中心簡介
 - Visit to Arts & Technology Education Centre
參觀藝術與科技教育中心



Upcoming events 活動預告

- **2018-11-17[Sat] 13:30-15:30**
 - **Talk on "Sound, Music and Engineering"**
「聲、樂及工程」講座
 - **音樂、錄像及多媒體藝術家馮炳輝先生經驗分享**
Experience sharing by Mr. Fung Bing Fai Makin
- Date of registration 報名日期：
2018-11-05[Mon] - 2018-11-08[Thu]
- Please follow the competition Facebook page for the link to registration website.
請留意比賽 Facebook 專頁公佈報名網址連結。



Upcoming events 活動預告

- **2018-12-01[Sat] and/or 2018-12-15[Sat]**

Session 1: 09:00-10:50

Session 2: 11:00-12:50

Session 3: 14:10-16:00

Workshop on “3D Printing and 3D Modelling Software”

「立體打印及立體模型設計軟件」工作坊

- Date of registration 報名日期：
2018-11-19[Mon] - 2018-11-22[Thu]
- No. of participants: Limited to 1 teacher and 3-4 students
參加人數上限人每校 1 位老師, 每隊 3-4 位學生
- The organizers will assign your team to one of the time slots, accommodating your preferences as far as practicable. If all your preferred time slots are full, your team will be assigned to the other time slot. The allocation will be done on a first-come-first-serve basis. 主辦單位會盡量根據報名表格的所選的時段編配活動時段。如所選時段皆滿，隊伍將被編配至其餘時段。時段編配會於活動報名完結後以報名時序進行。
- Please follow the competition Facebook page for the link to registration website.
請留意比賽 Facebook 專頁公佈報名網址連結。



Upcoming events 活動預告

- **2019-02-16[Sat] and/or 2019-02-23**

Session 1: 09:00-10:50

Session 2: 11:00-12:50

Session 3: 14:10-16:00

Workshop on “2D Design Software and Laser Cutting”

「平面電腦輔助設計軟件及鐳射切割」工作坊

- Date of registration 報名日期：
2019-01-21[Mon] - 2019-01-24[Thu]
- No. of participants: Limited to 1 teacher and 3-4 students
參加人數上限人每校 1 位老師, 每隊 3-4 位學生
- The organizers will assign your team to one of the time slots, accommodating your preferences as far as practicable. If all your preferred time slots are full, your team will be assigned to the other time slot. The allocation will be done on a first-come-first-serve basis. 主辦單位會盡量根據報名表格的所選的時段編配活動時段。如所選時段皆滿，隊伍將被編配至其餘時段。時段編配會於活動報名完結後以報名時序進行。
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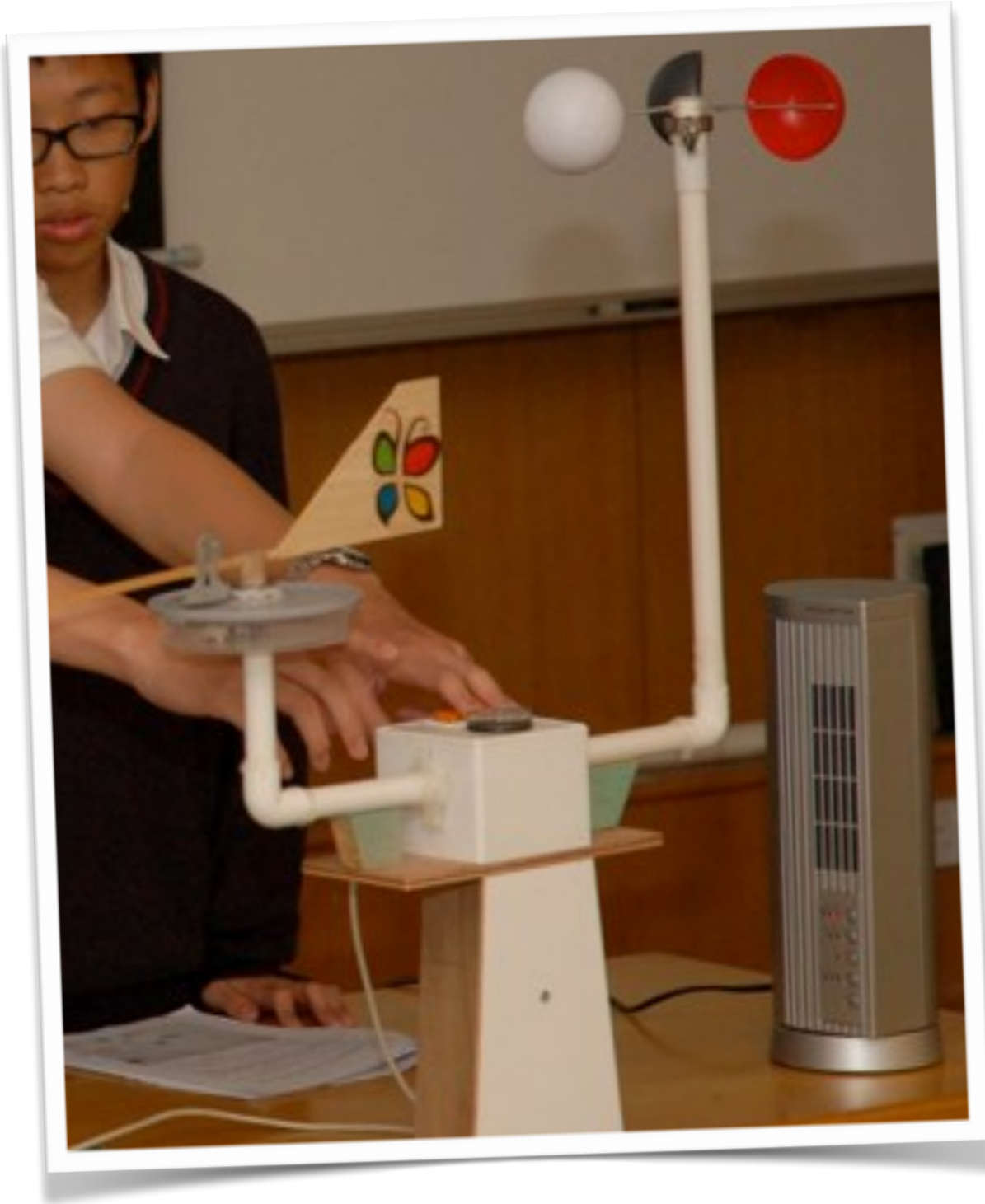


Upcoming events 活動預告

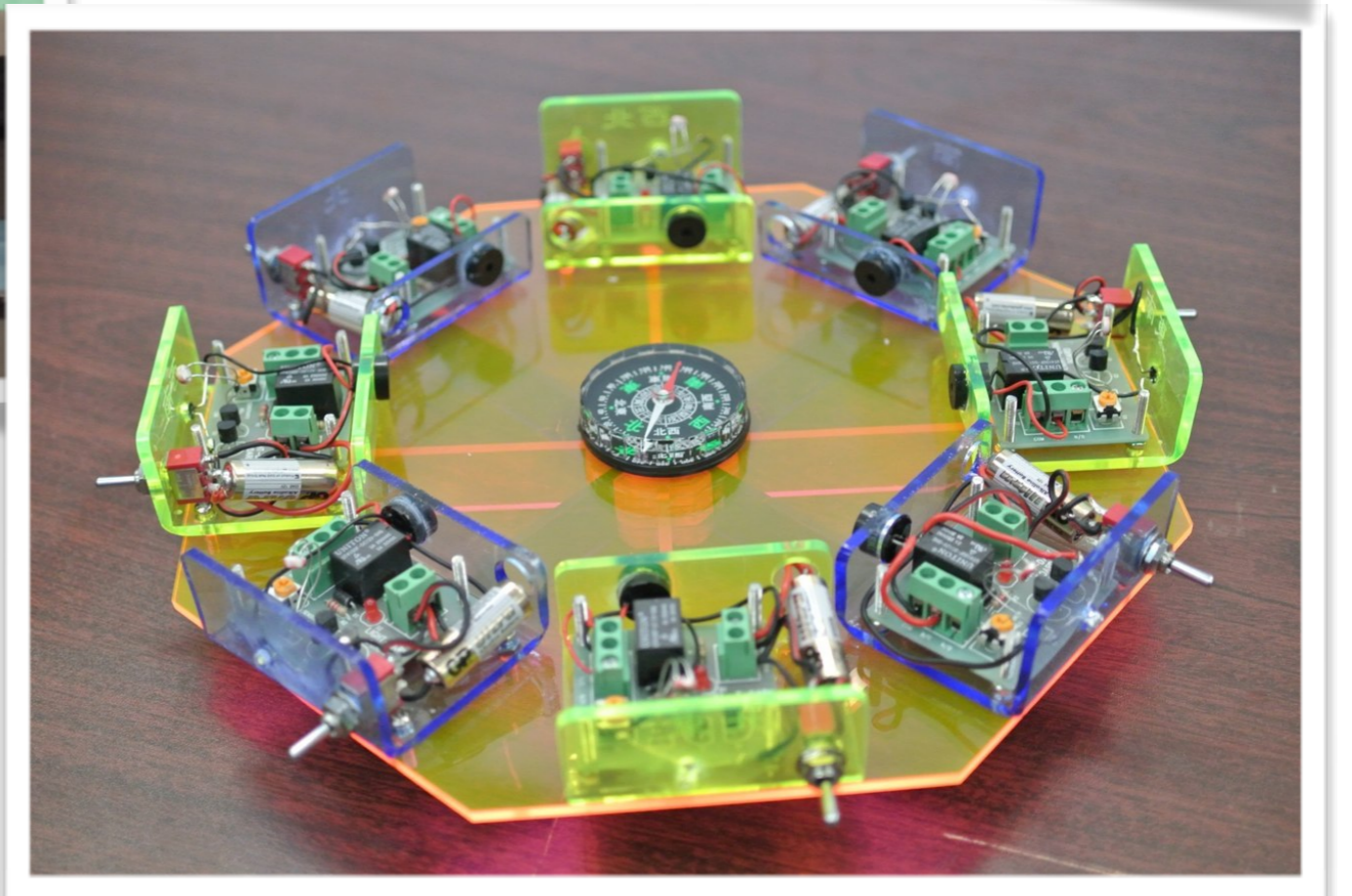
- Project Exhibition, Judging and Award Presentation
作品展覽、評審及頒獎典禮
- 2019-05-04[Sat] / 2019-05-11[Sat] (Tentative 暫定)
09:30-17:30
- Details will be announced two weeks before the exhibition.
詳情於展覽前兩星期公佈。



<http://www.cs.hku.hk/~rain/>



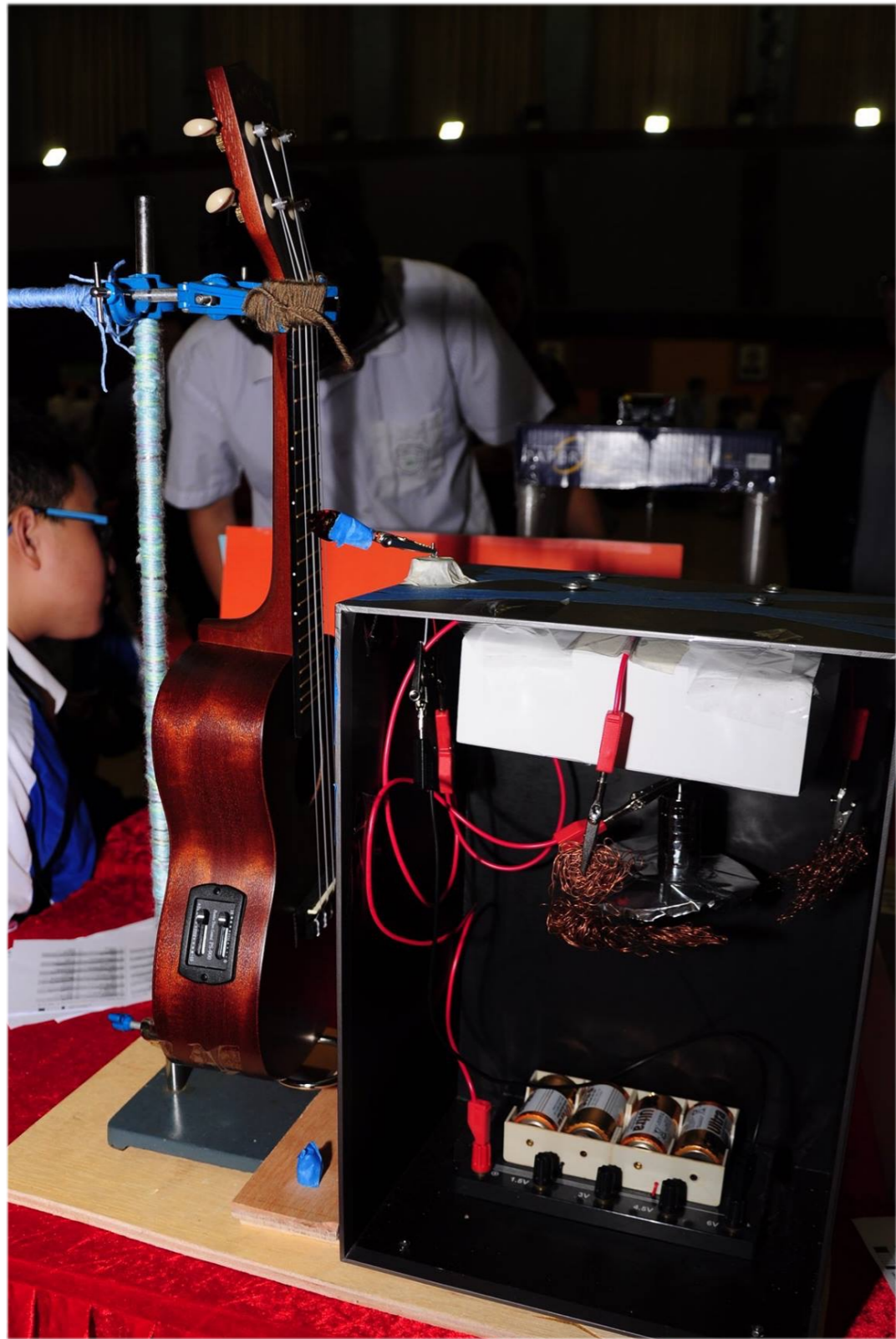
<http://www.cs.hku.hk/~wind/>

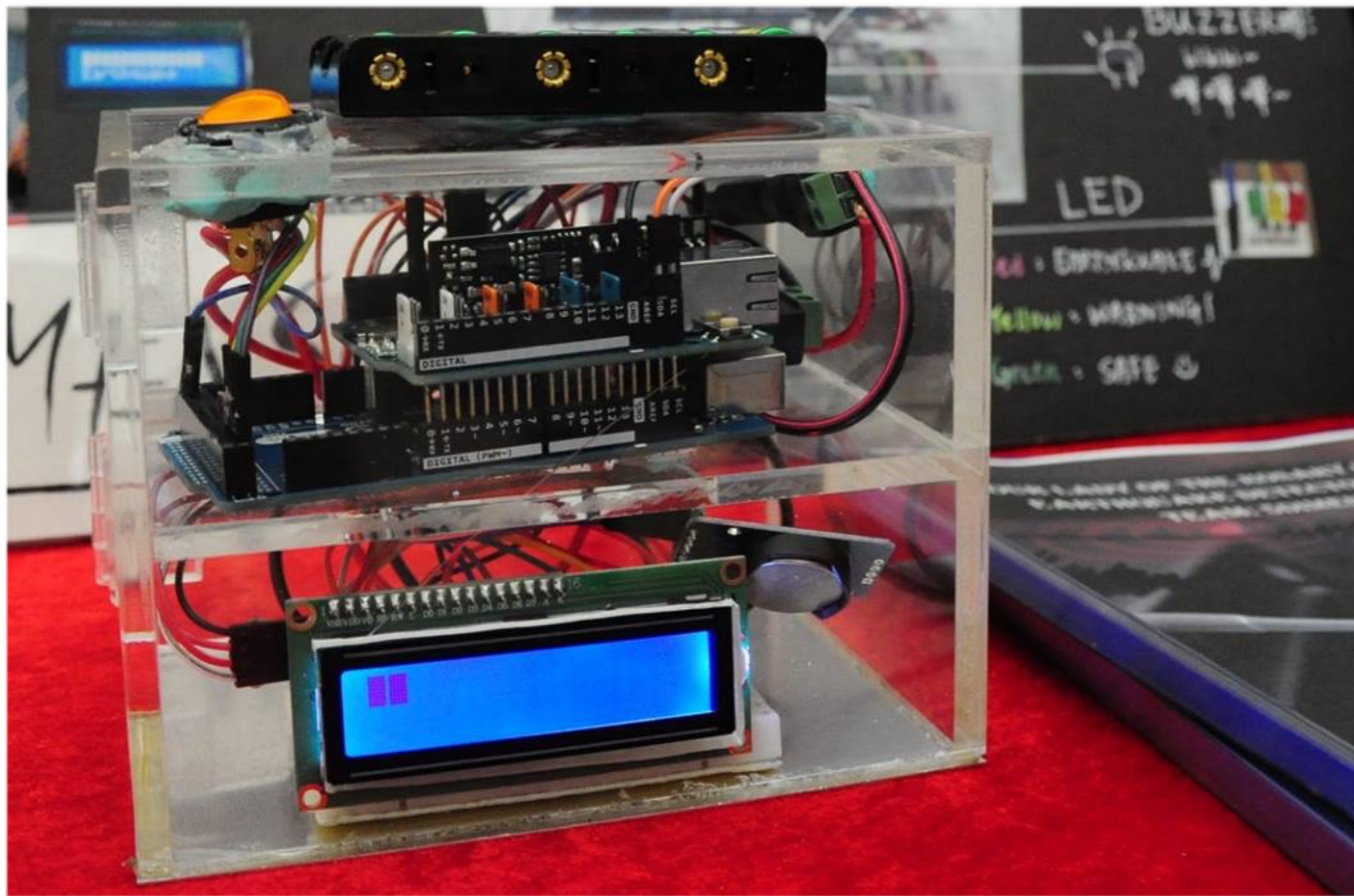


<http://www.cs.hku.hk/~light>

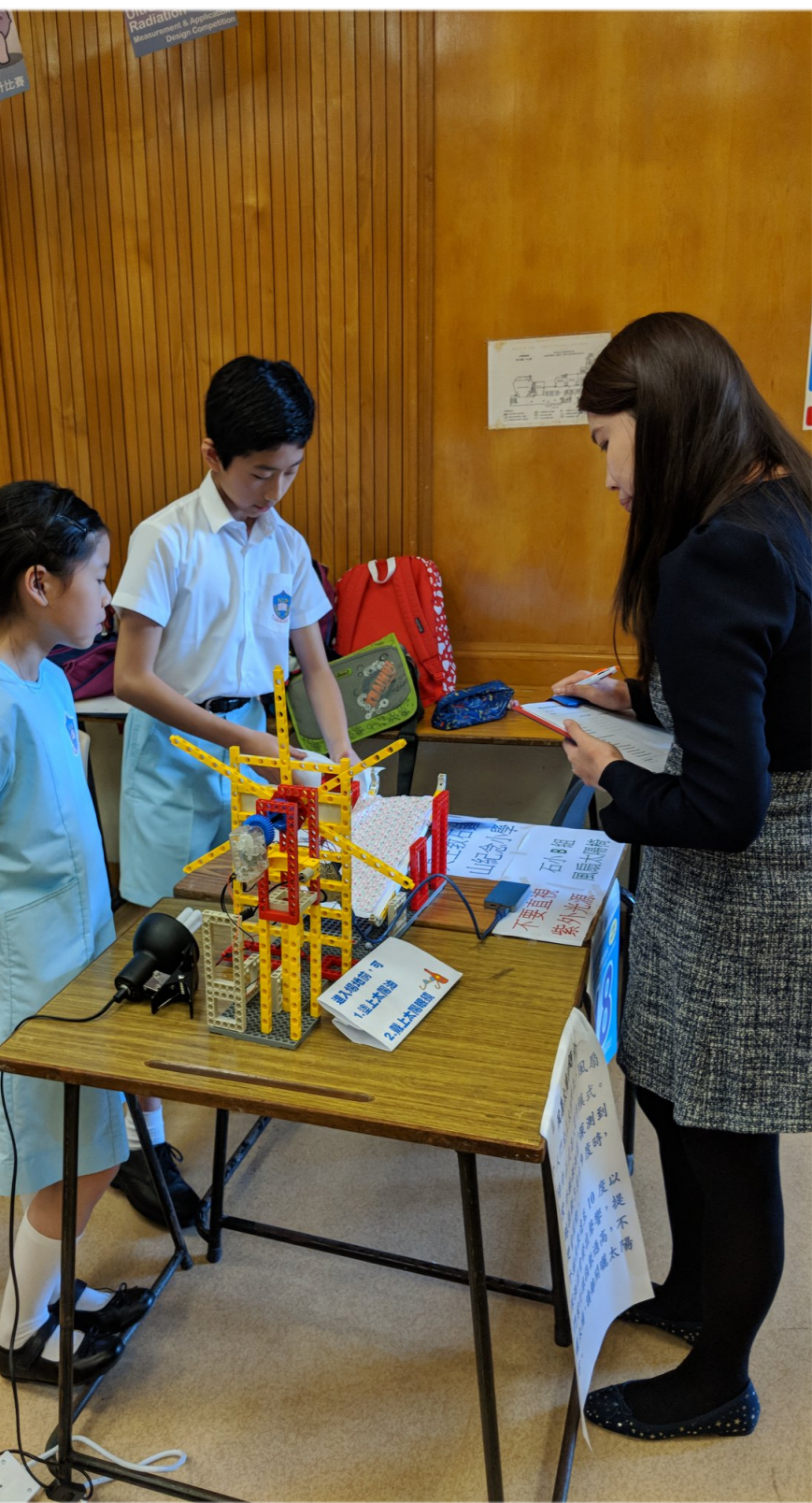


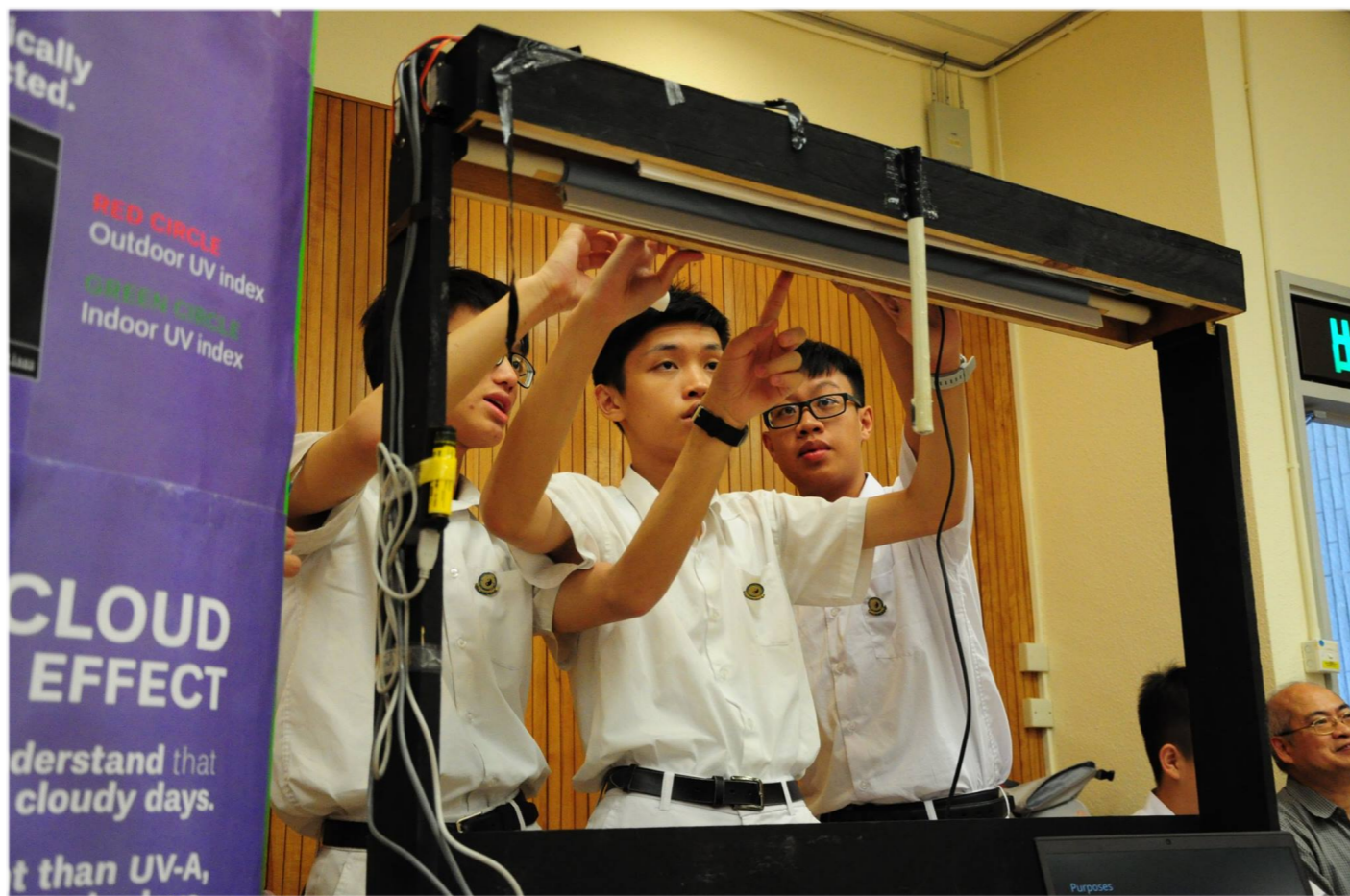
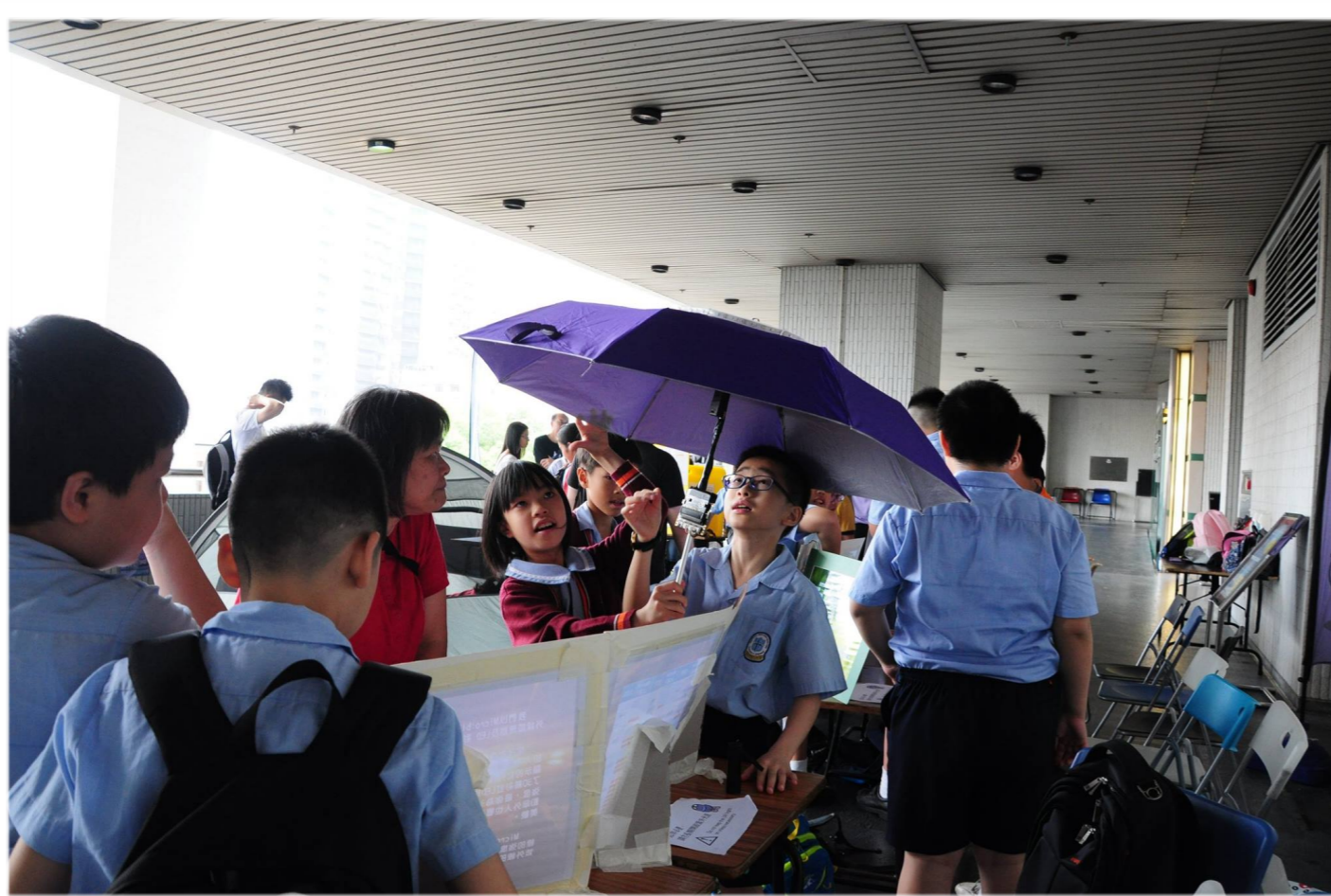
<http://www.cs.hku.hk/~sealevel>

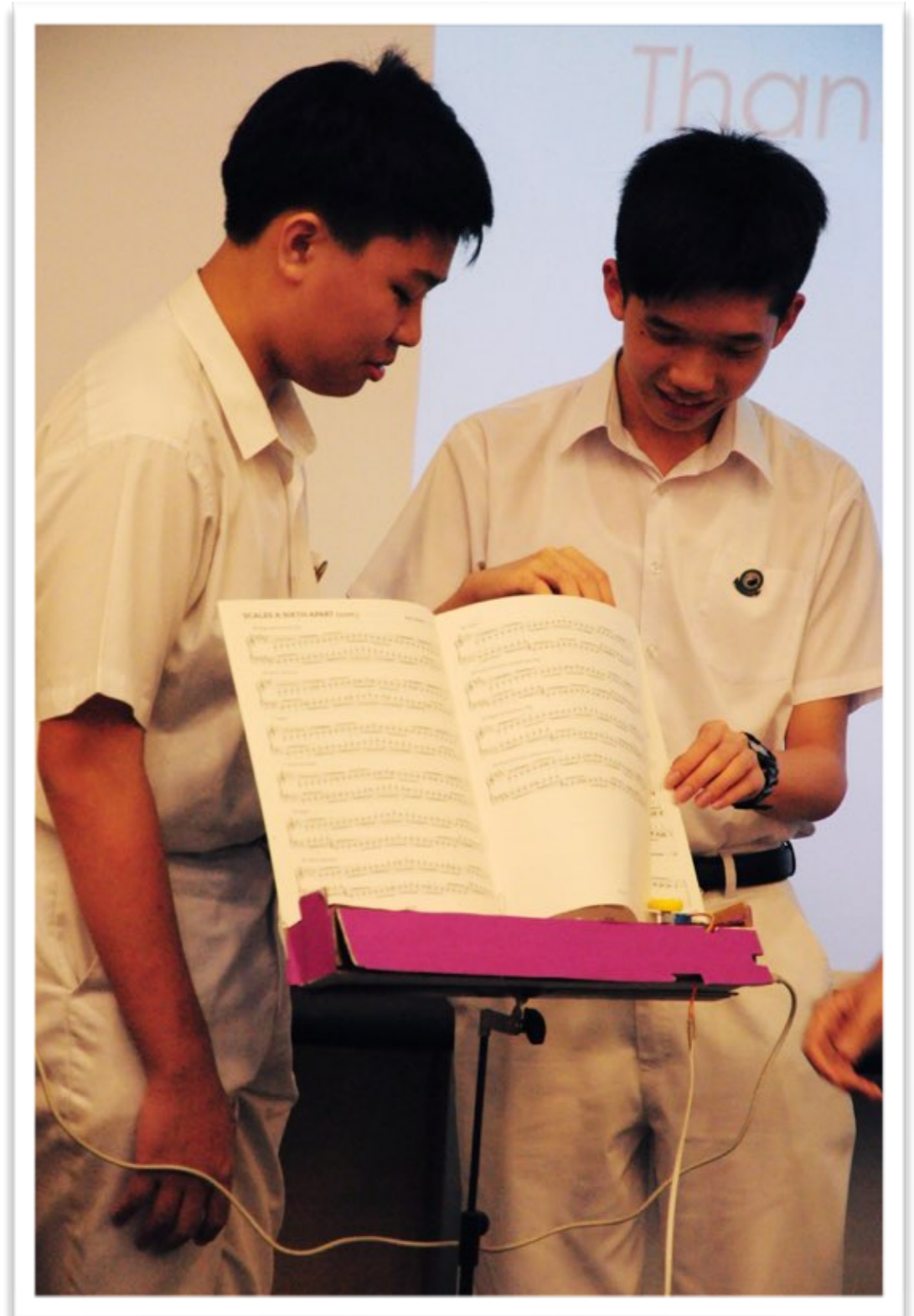
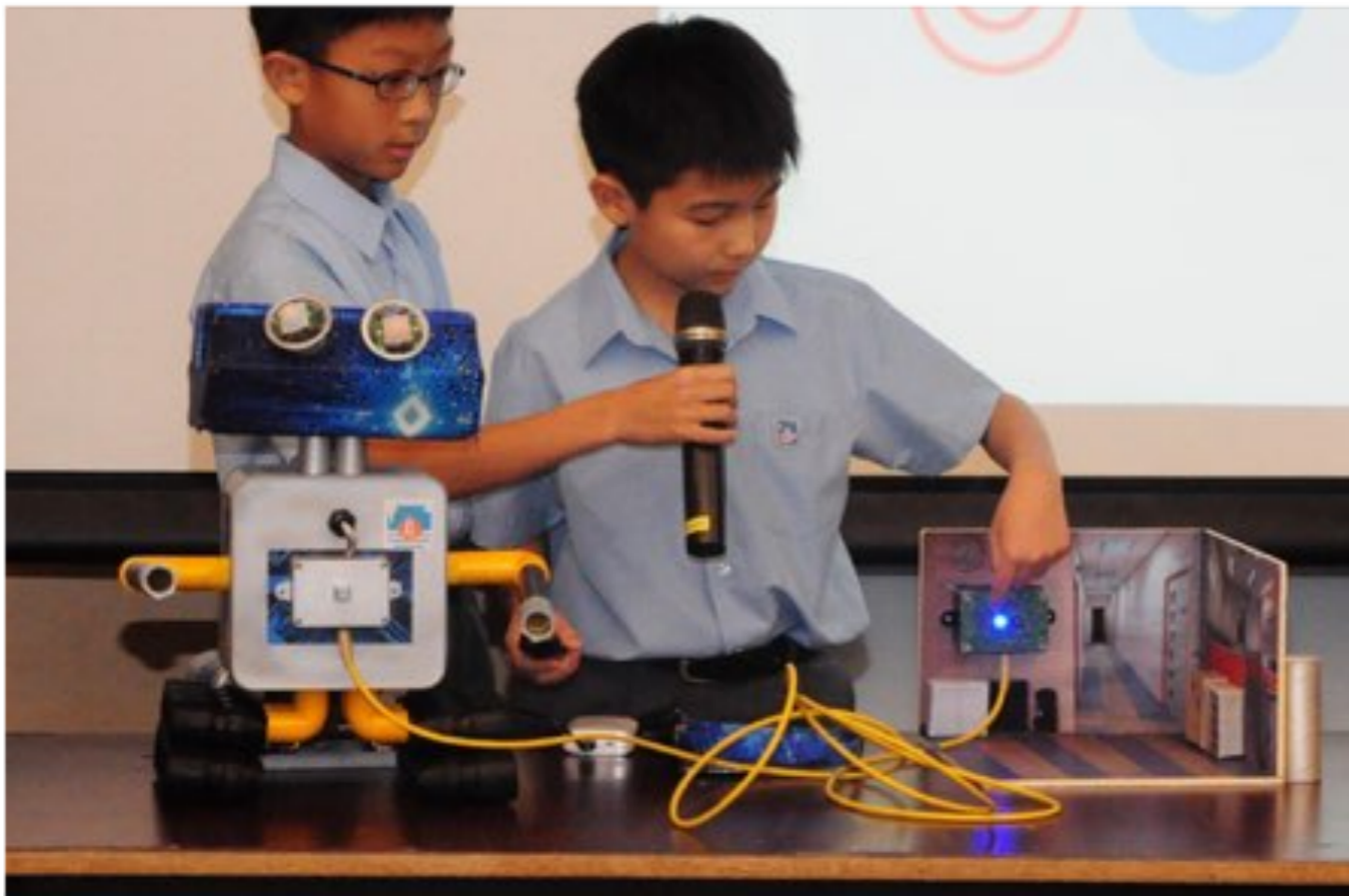




<http://www.cs.hku.hk/~quake>







<http://www.cs.hku.hk/~i4s>

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Links 連結



- Competition website 比賽網頁 
<http://www.cs.hku.hk/~music/>
- Facebook page  
<https://www.facebook.com/HKUEnggMusic>
- Facebook group 
<https://www.facebook.com/groups/HKUEnggMusic/>
- Instagram 
<https://www.instagram.com/HKUEnggMusic/>
- Email 電郵 
music@cs.hku.hk

Thank you 謝謝



<https://www.facebook.com/HKUEnggMusic>