



# 廖寶珊紀念書院

## Liu Po Shan Memorial College

### 學校通訊

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雷泳霖



梁志輝



廖謨基



盧瑤芝



莫明欣



莫沛豐



余毓芝



曾嘉麗



## 公益少年團傑出團員韓國交流活動

6D陳浩維獲選為公益少年團傑出團員，與其他香港代表一同前往韓國交流，了解彼邦的文化和環保工作。

### 6D 陳浩維

七月下旬，我參加了六日五夜的韓國交流團，走訪首爾多個景點和名勝，了解當地的風土人情。

每當談及韓國，大家自然會聯想到KPOP及泡菜。其實，除了流行音樂和飲食外，韓國在傳統文化、教育模式以至環保政策都別具特色。著名景點「景福宮」在南韓的地位等同中國的故宮，在宮內遊覽，不但滿眼是充滿歷史氣息的建築工藝，還經常遇到身穿韓服的當地人，一派盎然古意。韓國不少民間組織都鼓勵人民多穿韓服，以提升國民對韓服的重視。在定期舉辦的「韓服日」，身穿韓服的市民更可免費乘坐交通工具，或免費到訪國家地標。

我們藉這次交流機會，到訪當地的中學Apgujeong Middle School，與當地中學生一同上課。他們也有外籍英語教師，幫助學生提升英語水平，同時也致力推動電子教學，鼓勵學生多溝通討論。最令我們大開眼界的就是Apgujeong的圖書館，設計得像休憩區一樣的圖書館，實在是學生悠閒地享受閱讀樂趣的理想地方。

大型的廢物處理中心Dream Park則令我們了解韓國的環保政策。這個先進的中心採用高科技方法處理垃圾，不但將所需的佔地面積減至最小，更完全消除了垃圾產生的異味，驟眼看去，Dream Park更像一個郊野公園。反觀香港現正面臨堆填區飽和的問題，香港政府也許應參考其他地方的成功案例，盡速改善固體廢物的處理方法。



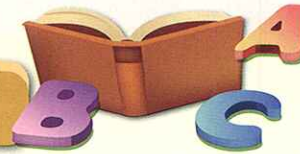


# YPEC Champions

Eight senior students took part in the *IET Young Professionals Exhibition & Competition* and won the Secondary School Section Championship and the Outstanding Presentation Award. Teammates include: Chow Sum-yin (6B), Leung Hing-chun (6D), Tang Beining (6D), Chan Ying-lam (6E), Ho Sze-sze (6E), Wong Hui-tat (6E), Wong Lui-tik (6E) and Wong Wang-ching (6D).



## What Is ISAC and How It Works



### 6E Ho Sze-sze

My teammates and I created a mini-computer system called the *Ideal School Automation Control* (ISAC) which aims to activate the appliances in the classroom through an internet control or an auto-sensor. We chose the programming language *Python* to control the function of the ISAC mini-computer because it's easier to understand and use. With the implementation of the ISAC, a better study environment is provided and the power usage of the school can be managed effectively to reduce energy consumption.

To display the idea of our project, we made a model to show how to control the light intensity and temperature of the classroom with some simple light and temperature sensors. These sensors are all connected to the *General-purpose Input/Output* (GPIO) on the Raspberry Pi (RPI). The RPI acts as the server of the ISAC. Once a client clicks a button on the control panel, a corresponding *JavaScript Object Notation* (JSON) object is sent to the server via web socket. Upon receiving the message, the RPI alters the output of the GPIO to start or shut down an electrical appliance.

In our model, we use some LED light bulbs, small fans, and servomotor (servo) to simulate a real classroom setting with lamps, air-conditioners and curtain-driver. For example, within a hot environment the temperature sensor sends a signal to the RPI. Then the RPI generates an output signal to turn on the small fans. Of course, the small fans improve the ventilation of the classroom. Another example, the light sensors within a dark environment send a signal to the RPI to generate an output signal turning on the LED light bulbs automatically.

The light intensity of the room is controlled by the uplifting of the curtain which is activated by the working of the servo. However, the working voltages of fans and servos are greater than the output voltage of the GPIO, we need to use a simple relay to provide higher voltage to such electronic components. Furthermore, a signal of *Pulse Width Modulation* (PWM) is needed to control the servo. Different degree of the servo is controlled by a different duty cycle of the GPIO.

Regarding the automatic control, the client repeatedly sends a message to the server to ask for the latest light and temperature data. The output voltages generated by the RPI control the LED lamps, fans and servomotors automatically.

In our project, we, the client, receive the messages emitted from the server, then update the sensor data. Moreover, the sensor data will display the working conditions of the classroom automatically on a webpage, which is written by JavaScript. To control ISAC manually, we connect to the same local area network with the RPI. We can either use a mobile phone or a computer to enter the control panel page.

In a real situation, most electrical appliances run on 220 V mains supply. To solve such problems in real life, practical relays are needed so that the small voltage in the RPI can be used to control the working of another circuit running on higher voltages at the output ends of the relays.

The ISAC system facilitates the implementation of smart classrooms. We hope we can create more smart products in the future to help improve the quality of our living environment.





# A Difficult but Valuable Experience

6E Wong Hiu-tat

I was overjoyed when the judge announced that the LPSMC team won the YPEC Championship. I suppose the most difficult part for us was that we had to learn everything from scratch. Our project, i.e. the "Ideal School Automation Control", was to design an automation

control for a simulated classroom. In order to achieve the goal, we needed to acquire specific knowledge and skills of programming and mechanical engineering. In addition, there was a considerable amount of reading materials and we were running out of time due to final examinations and other activities we had to participate in. We were all novices, nevertheless, we prevailed over all these difficulties by doing our best.

As far as the model was concerned, we had to pick up some fundamental mechanical skills such as welding the wires. Fortunately, with the help of Mr. Paros Kwan, our instructor, we could complete the model on time so that we could present it to the judge.

Time was our biggest enemy because we learned about the competition in just a short time before the deadline. So we had to speed up our work by making use of our after-school hours. Although all of us were exhausted before the competition, we were overwhelmed with joy when we received the championship trophy. Finally, we thanked all the teachers for encouraging us during our time of struggle and treating us to wonderful meals.



## 校友消息

校友洪丹妮(2013年畢業)憑優異成績入選2015-16年香港科技大學工程學院院長榮譽榜。陳盈君(2012年畢業)及譚曉彤(2015年畢業)分別獲香港科技大學頒贈Scholarship Scheme for Continuing Undergraduate Students及大學獎學金。陳盈君更於2015-16年秋季名列院長榮譽榜，並赴荷蘭Utrecht University交流。關德熙(2016年畢業)則獲中文大學頒發入學成績優異獎學金，入讀保險、財務及精算學系。

1A 曾浚健	1B 林淑婷	1C 伍宇晴	1D 莊家熙
2A 陳智豪	2B 陳融昕	2C 周弘軒	2D 鄭芯雅
3A 文子欣	3B 龐栢然	3C 陳嘉濠	3D 曾慧琳
4A 陳翠婷	4B 陳宏晞	4C 陳彥亨	4D 劉曉琳
5A 李卓雅	5B 譚建榆	5C 何蔚謙	5D 黃軒靖
6A 李善恩	6B 劉嘉琪	6C 羅寅盈	6D 何文欣

九月之星

4E 陳曉維

5E 林心樂

6E 黃鈺淇



# Greetings from Mr. Linn

Good day. Please allow me to introduce myself. My name is Fernando Linn but you can call me Mr. Linn. I am excited to be here and the warm reception that I have received from this school has been wonderful.

The teachers are very nice and the students are so sweet and kind.

To tell you about where I come from. I am from Tucson, Arizona in the United States of America. Tucson is located in a very hot and dry desert. It is so hot that grass can't survive in the climate. So you will see no grass in my hometown, only dirt and rocks. But we do have cacti everywhere. The cactus is our local symbol.

Unlike Hong Kong, you will see no people outdoors. Though my home city has over 1 million people, the heat is so deadly that nobody steps outside.

To give you some details about myself: I am a husband and a father. My wife is a native of Hong Kong and I have a baby son named Emilio.

I love to read history books especially books about ancient times. I am most fascinated with the Greeks and Romans. They had a lot of customs that would be considered bizarre today. For example, the Romans shared used toilet rags to wipe themselves. Disgusting! But fascinating.

I also read lots of comic books. I am currently reading Wonder-Woman, Suicide Squad, Darth Vader, Star Wars and just about every Batman and Superman title. I love superheroes so much that I wrote my Master's Degree dissertation on Batman and Superman.

The Star Wars Saga, The Dark Knight, Raiders of the Lost Ark and Cinema Paradiso are my favourite movies of all time.

I have probably watched the original Star Wars over 200 times.

I played American-football and baseball. I played American football in high school and played baseball in various leagues from a youth to a young adult. My family and I love to go to sporting events together. We go to baseball games together in the summer. My favourite teams are the Los Angeles Dodgers and Arizona Diamondbacks.

Most of all, I really enjoy watching boxing because my Dad was an amateur boxer. He



never officially went professional but he was a paid sparring partner for Pajarito Moreno, a boxer that was

famous for knocking out opponents. When Moreno was named one of the 70 greatest punchers in boxing history by "The Ring Boxing Magazine", I was amazed how tough my Dad must have been to step in the ring with such a monster. I am very proud of my father. Boxing is the one thing that my Dad and I can chat about for hours.

Anyway, that's just a little bit about me. I am enthusiastic and excited to work with such a fantastic staff of teachers and administrators. I am equally excited to chat with all of the students and I hope that many students visit me in the English Corner. The students can talk to me about anything! I love to chat. I know this will be a memorable and wonderful year!

