

### 智能保安機械人 Total Equip i-Robot

陳易希 Chan Yik Hei

中華基督教會譚李麗芬紀念中學 CCC Tam Lee Lai Fun Memorial Secondary School

#### 作品簡介 Project Introduction

智能保安機械人利用紅外線裝置避開障礙物在屋內巡邏；並用人面識別系統及密碼控制氣動裝置，預報有外人闖入，並致電戶主。如佩帶上振動感應器的長者跌倒或受到較大的衝擊時，感應器會即時觸動手提電話快速鍵，並致電通知戶主。視像軟件錄影屋內的情況及當屋內溫度突然上升至超過預設的溫度數值時，溫度感應器亦會觸動手提電話快速鍵，致電戶主。利用外／內聯網遙遠控制屋內電器的運作及機械人的活動程序。

Total Equip i-Robot uses infra-red sensors to move around in the house and can monitor your home when you are absent. It uses a face recognition camera system that can detect forced intrusion of a stranger and can automatically call you via its built in mobile phone. It also houses a temperature sensor that can detect a sudden and abnormal rise in temperature that can send a fire alarm. The whole system can be controlled remotely via the internet and can program the robot remotely.



#### 主要獎項 Major Awards

- 獲國際天文學聯會把編號 20780 小行星命名為「陳易希星」(2005)  
International Astronomical Union named the minor planet 20780 as “Chan Yik Hei” (2005)
- 第 55 屆英特爾國際科學與工程大獎賽 (2004) --- 工程學二等獎  
The 55<sup>th</sup> Intel International Science and Engineering Fair (2004) --- Second Place Award in the category of Engineering
- 第 18 屆全國青少年科技創新大賽(2003) --- 科技創新發明一等獎  
The 18<sup>th</sup> China Adolescent Science and Technology Innovation Contest (2003) --- First Place Award in the category of Science and Technology Invention
- 第 5 屆香港青少年科技創新大賽(2003) --- 科技創新發明一等獎  
The Hong Kong Youth Science & Technology Innovation Competition (2003) --- First Place Award in the category of Science and Technology Invention