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and Communication Technology Curriculum  
Series: (5) Latest Technologies on 'Internet  
Services & Applications' and 'Wireless  
Computer Network'

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28 Feb 2008

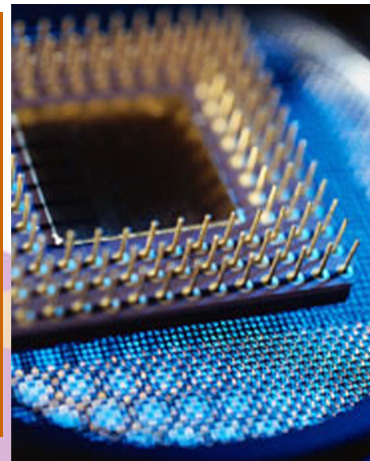
*The Chinese University of Hong Kong*

# Faculty of Engineering

**Professor Aaron Ho (何浩培)**

**Associate Dean of Engineering  
(Student Affairs)**

工程學院

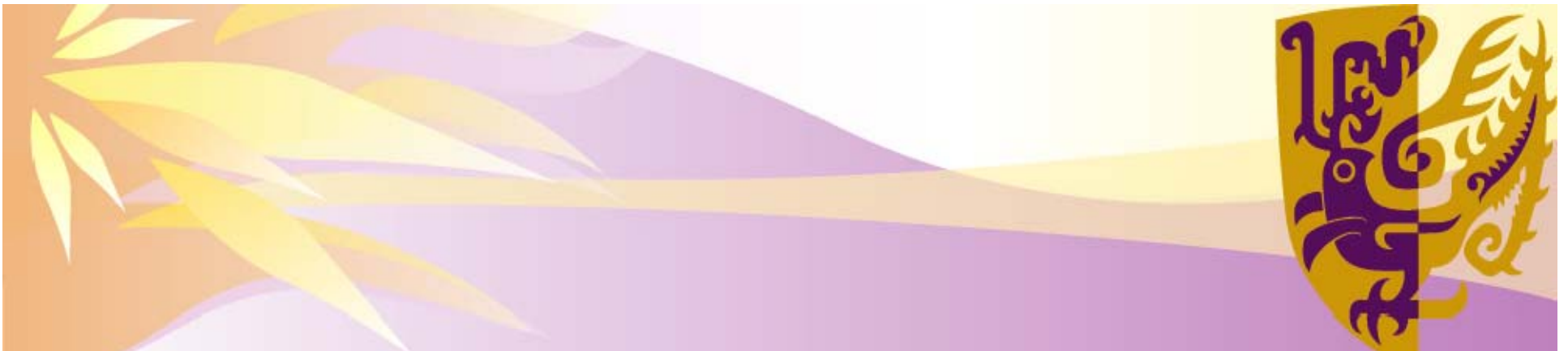


# **“Meeting the Challenges of Engineering Education”**

- **Undergraduate Programmes**
- **Engineering Education at CUHK**
- **University-School Partnership**



# Undergraduate Programmes



# Engineering Undergraduate Programmes

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## BEng ( 工程學學士 )

- ▶ **Computer Engineering** 計算機工程學 **CE**
- ▶ **Electronic Engineering** 電子工程學 **EE**
- ▶ **Information Engineering** 訊息工程學 **IE**
- ▶ **Mechanical & Automation Engineering** 機械與自動化工程學 **MAE**
- ▶ **Systems Engineering & Engineering Management** 系統工程與工程管理學 **SEEM**

## BSc ( 理學學士 )

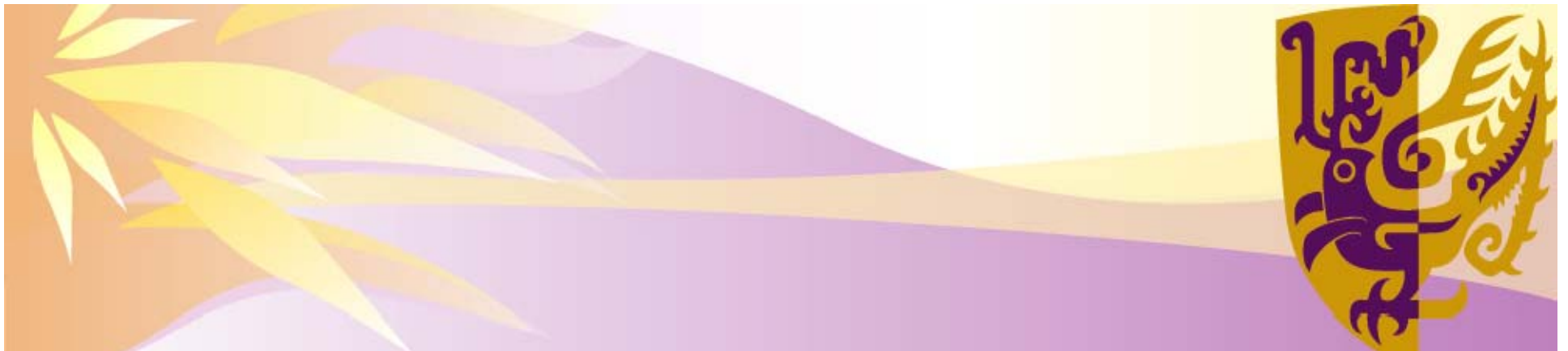
- ▶ **Computer Science** 計算機科學 **CS**

## Double-Degrees ( 雙學士學位 )

- ▶ **Mathematics & Information Engineering (BSc+BEng)**
- ▶ **Engineering & Business Administration double degree options (BEng+BBA)**



# Engineering Education at CUHK



# Current Situation

## ➤ Intake Quality

- Engineering no longer attracts top students

## ➤ Background Engineering Knowledge

- Lack of general knowledge for solving engineering problems
- Inadequate pre-university training/activities related to engineering

## ➤ General Interest

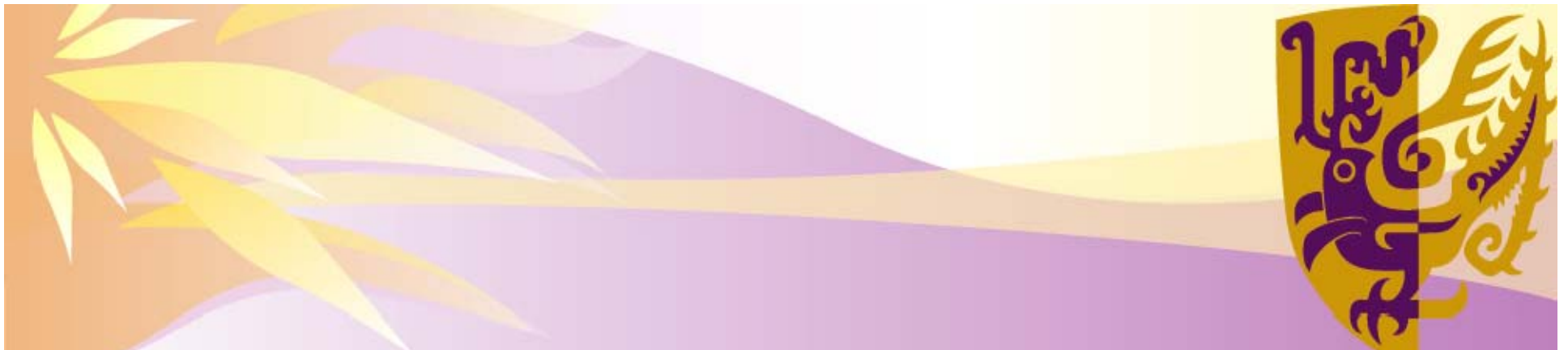
- Poor perception on Engineering – too tough and too specialized
- Engineering –Career prospect not as good as business/finance
- The truth - we are completely surrounded by hi-tech products

## ➤ Vicious Cycle Continues

- High school students lose their interest and do not perform well
- Universities produce less competent graduates

# Our Role as an Engineering Faculty

- **To deliver quality education to students**
- **To conduct leading edge research**
- **Promoting engineering & technology education to youngsters**
  - **Close collaboration with stake-holders**
  - **Bridge-building with high schools**
  - **Provide opportunities for promoting technology education**





# Promoting Engineering & Technology Education

## ➤ Faculty Activities

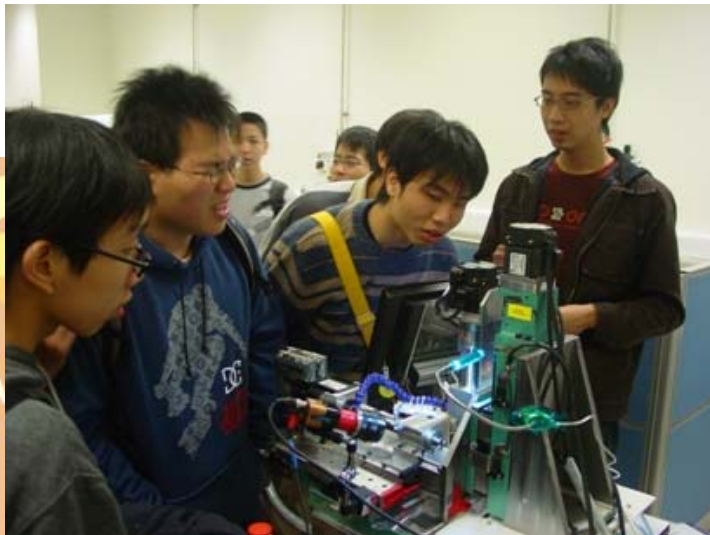
### ➤ Summer Educational Programmes

#### ➤ Summer Engineering Academy

➤ A two-week training programme for F.5-F.6 students to arouse their interests in engineering

➤ Youth IT Summer Camp IT青少年夏令營

➤ Youth IT Winter Camp IT青少年冬令營



# Promoting Engineering & Technology Education

## ➤ Faculty Activities

### ➤ Engineering Elite Club

- Established by the Faculty in 1994
- Aims to nurture potential engineering youngsters
- Activities: Technology Summer Camp, Research Opportunity Programme, technology projects, social gatherings.....



# Promoting Engineering & Technology Education

## ➤ Faculty Activities

➤ Technology Seminar Series offered to secondary school students

➤ Public Lecture Series organized by the University

➤ IBM Engineering Week, FTSS talks organized by the Faculty

➤ Support to IT educational activities

➤ Support to HKJSECS Exhibition

➤ IT Teacher Training

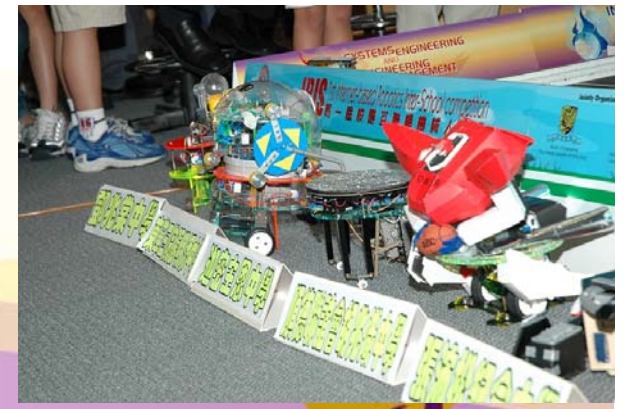


# Promoting Engineering & Technology Education

## ➤ Faculty Activities

### ➤ Technology Competitions

- “Catch Me If You Can” 探索號比賽
- Electronics Innovation Award 電子科技獎勵計劃
- Internet Robotics Inter-School competition (IRIS)  
校際互聯網機械人大賽
- Interschool Competition on System Modeling and Optimization (COSMO) 校際系統建模與優化競賽



# Promoting Engineering & Technology Education

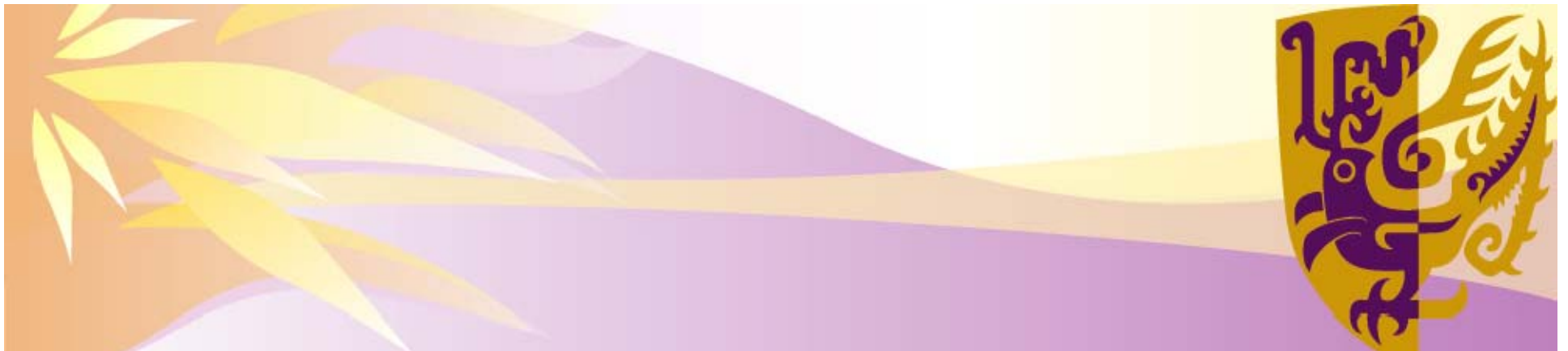
## ➤ Faculty Activities

### ➤ Campus and Laboratory Visits

➤ Over 30 visits to the Faculty and its department laboratories in the past two years



# University-School Partnership



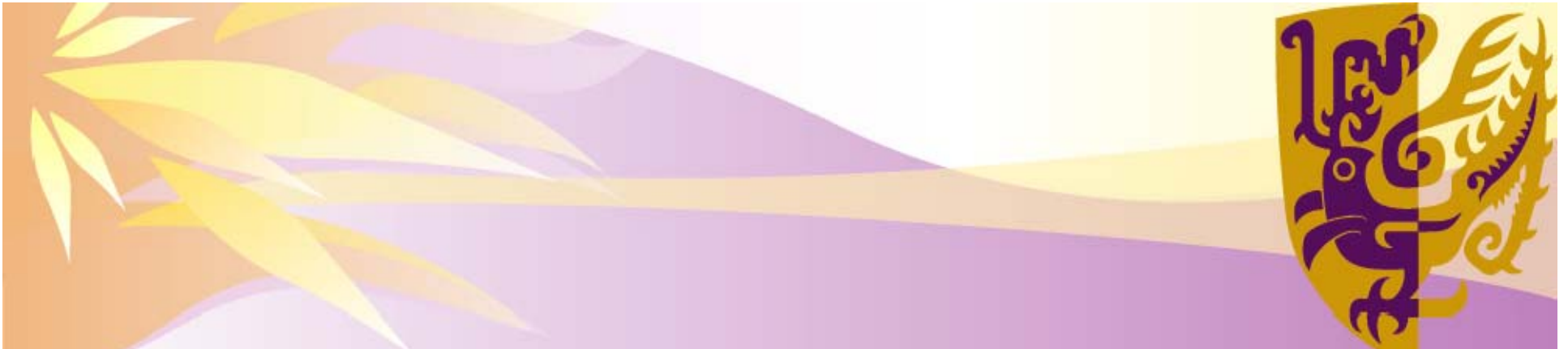
# University-School Partnership

- **Leverage on complementary strengths – “Win-Win”**
  - **University:** hardware, knowledge base, but not sure of the actual needs in schools
  - **Schools:** very large student population, first hand information on student needs, but not sure what university education can offer
- **Develop long-term communication channels to increase university-school transparency**
- **Enhance technology education in school curriculum – a component not present in current school subjects**



# University-School Partnership

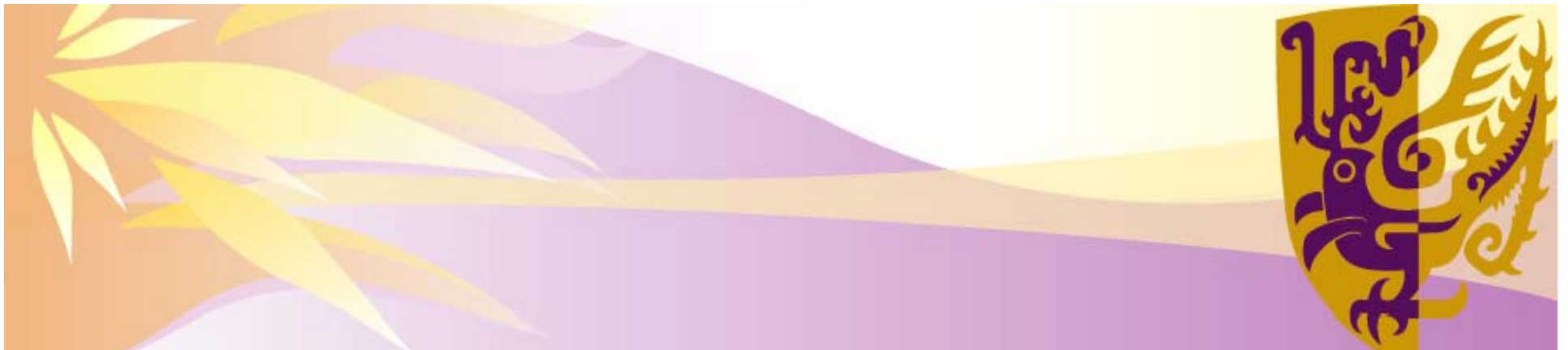
- **Create opportunities for students – participate in competitions and technology projects, stimulate multi-lateral thinking, e.g. IT Ethics (「疑似藝人不雅照片」風波反映出香港互聯網不良文化, 中大工程學院副院長(外務), 刊登於2008年2月14日香港經濟日報)**
- **Make use of 3-3-4, incorporate technology in general education**
- **Re-build the reputation of technology – “innovation, application and solution”**





# Contact Us

- Tel.: 2609 8446 / 3163 4294
- Email: [facultyoffice@erg.cuhk.edu.hk](mailto:facultyoffice@erg.cuhk.edu.hk)
- Fax: 2603 5701



**Thank you!**

