

Microcontroller Application Design Contest (2017 – 18)

Dr. Lawrence Cheung

Objectives

- To arouse students' interest in microcontroller-based electronic product design.
- To provide a platform for them to exercise their creativity and innovation through team works.

Sponsors

- RS component Ltd.
 - <http://hken.rs-online.com/web/>
- EGG Technology
 - <http://www.eggtechs.com/>

Products

- Any areas (e.g., Internet of Things, sensor networks, system control)
- Any interesting things!
- Hint 1: think something that make the difference, even it may be small or just fun!
- Hint 2: think something that you are familiar with or you know so well!
- Let us see some examples ...

Products

- RS

- Technology Hubs: <https://www.rs-online.com/designspark/technology-hub>
- Arduino: <https://www.rs-online.com/designspark/arduino>
- Sensing technology: <https://www.rs-online.com/designspark/sensing-technologies>
- Electronic Design: <https://www.rs-online.com/designspark/electronics-design>

- Instructables.com

- Arduino-Fart-O-Meter: <http://www.instructables.com/id/Arduino-Fart-O-Meter/>
- RGB LED Strip Controller: <http://www.instructables.com/id/RGB-LED-Strip-Controller/>
- Infinity Mirror: <http://www.instructables.com/id/Arduino-controlled-RGB-LED-Infinity-Mirror/>
- RFID cat door: <http://www.instructables.com/id/RFID-cat-door/>

- See what our students did before...

- <http://www.eie.polyu.edu.hk/event/madc/>
- <http://www.eie.polyu.edu.hk/event/madc2016-17/>

How to join?

- Submit your proposal to Blackboard.
- At most three students form a group to join the contest and at least two of them are EIE students.
 - It means one can be from other departments in PolyU.

Schedule

- Phase I: Proposal submission (at most 8 pages)
 - Format: 12-point font, single-line spacing, A4 size
 - Features and design of your product
 - Estimated cost (not more than HK\$2,000)
 - An excel datasheet to show all components that you need from RS company
 - Time schedule to implement the product
 - A sample proposal can be found in Blackboard.

Schedule

- **Brief session**

- Date: 22 Dec (Friday)
- Time: 3:00 pm – 4:00 pm
- Venue: CF004
- Objective: Come to tell us your idea and we will tell you how to make your idea even better.
- **Remark**: Come to join the session. It will be very helpful if you want to join the competition.

Schedule

Deadline to submit your proposal to Blackboard:

5:00 pm, 27 Dec (Friday)

Date to announce the shortlisted participants to Phase II: 29 Dec

Schedule

- Phase II: Implementation
 - Financial support from our department and RS company.
 - Eight weeks (including Chinese New Year holidays) – Two progress meetings
 - 20-minute presentation (15-min for presentation + 5-min Q & A) with demonstration (if possible) –
- Date: **26 Feb 2018 (Monday, evening)**

Prizes

- 1st Prize: HK\$500 + certificate
 - You may have an opportunity to be a RS summer intern!
- 2nd Prize(s): HK\$200 + certificate
- 3rd Prize(s): HK\$100 + certificate
- Merit Prize(s): certificate
- Post on our department, RS web page and EGG Technology Facebook.
- Good for your CV and further study

End