

# Faculty of Engineering



1962



2013



In line with the global tertiary education scenario, efforts are in place to drive the Faculty towards excellence and to ensure that the human capital produced by the university meets current needs. Towards this direction, the Faculty has adopted the National Tertiary Education Strategic Plan and inputs from various stakeholder programmes as the basis to improve the quality, competitiveness and creativity of each course offered.

2015



# UNIVERSITY OF MALAYA



## Engineering @UM

Mas Sahidayana Mohktar

Center for Innovation in Medical Engineering

Department of Biomedical Engineering

University of Malaya



**CARTA ORGANISASI PENGURUSAN  
FAKULTI KEJURUTERAAN**



**PROF. IR. DR. NOOR AZUAN ABU OSMAN**  
Dekan



**PROF. IR. DR. ABDUL AZIZ ABDUL RAMAN**  
Timbalan Dekan (Ijazah Dasar)



**PROF. DR. SULAIMAN WADI HARUN**  
Timbalan Dekan (Ijazah Tinggi)



**PROF. IR. DR. RAMESH SINGH A/L KULDIP SINGH**  
Timbalan Dekan (Penyelidikan)



**DR. NOOR AZIZI MARDI**  
Timbalan Dekan (Pembangunan)



**PROF. IR. DR. MOHD ZAMIN JUMAAT**  
Ketua  
Jab. Kejuruteraan Awam



**PROF. DR. MASJUKI H.J. HASSAN**  
Ketua  
Jab. Kejuruteraan Mekanik



**PROF. IR. DR. MOHD AZLAN HUSSAIN**  
Ketua  
Jab. Kejuruteraan Kimia



**DR. AHMAD KHAIRI ABDUL WAHAB**  
Ketua  
Jab. Kejuruteraan Bioproses



**PROF. MADYA DR. HAZLIE MOKHLIS**  
Ketua  
Jab. Kejuruteraan Elektrik  
Elektrik



**SHAHZATUL ERMIZA JOHOL**  
Penolong Pendaftar Kanan (N4)



**ALIAS ABDULLAH**  
Pegawai Sains Kanan (C4)



**SHAHIBULLAH ITHNIN**  
Pegawai Teknologi Maklumat Kanan (F4)  
PEMANGKU



**HANIF SABTU**  
Pegawai Kawangan (W4)



**SALBIAH SAMSUDIN**  
Penolong Pendaftar (N4)



**MUHAMMAD SHAHARUDDIN NUJI**  
Penolong Pendaftar (N4)

# UNDERGRADUATES PROGRAM

- Department of Biomedical Engineering
- Department of Chemical Engineering
- Department of Civil Engineering
- Department of Electrical Engineering
- Department of Mechanical Engineering



## PAST and PRESENT

- Bachelor Degree of Design and Manufacturing
- Workshops on Innovation (voluntarily basis)
- Thought courses
  - Basic of entrepreneurship culture (University level) – it is compulsory for all students to take this subject





## BUT...

- Bachelor Degree of Design and Manufacturing- **less than 20 students register**
  - Workshops on Innovation- **only 1/3 of the invited participant turn up**
  - Thought courses
    - Basic of entrepreneurship culture (University level)
- **Student just enrol for the grades**



## WHY...

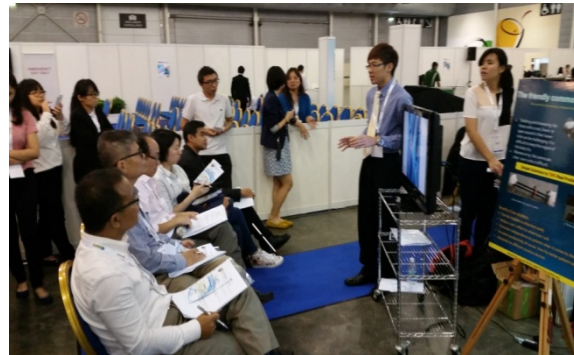
- Student did not see the benefits
  - Career path – more job opportunities as Engineers (**Industry**)
  - they thought their innovation do not have values (**mind set**)
  - they also thought to become entrepreneur need a lots of **money** to start
- Cultural/background/family (**from beginning**)



# SO...AT THE FACULTY LEVEL WE...

- 1- Add a course called the capstone design projects for all engineering students
  - Then we invite the Industry to show that student can innovate and design
- 2- We bring our student to competitions
  - The faculty allocated some fund
- 3- The faculty improve the facilities to create an environment that encourage discussion and collaborate with other university and industries to learn
- 4- BEGIN Challenge
  - Organized for School Students
- 5- ENGENIUS
  - A conference for the undergraduate student to presents their work





Competition: (1) ARTTs Challenge, Singapore Expo. (2) INOVASI Challenge, MOSTI, Putrajaya. (3) i-ENVEX 2015, Perlis





*"Producing Leaders Since 1905"*





# Collaboration With University/ Institution

"Producing Leaders Since 1905"

No. of Collaboration :

| Local      | International |
|------------|---------------|
| 5          | 85            |
| TOTAL : 90 |               |



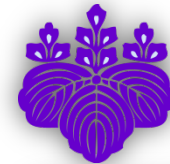
東京大学  
THE UNIVERSITY OF TOKYO



KANAZAWA  
UNIVERSITY



Keio University



筑波大学  
University of Tsukuba



山形大学  
YAMAGATA UNIVERSITY



大阪大学  
OSAKA UNIVERSITY



長岡技術科学大学  
Nagaoka University of Technology



徳島大学  
The University of Tokushima

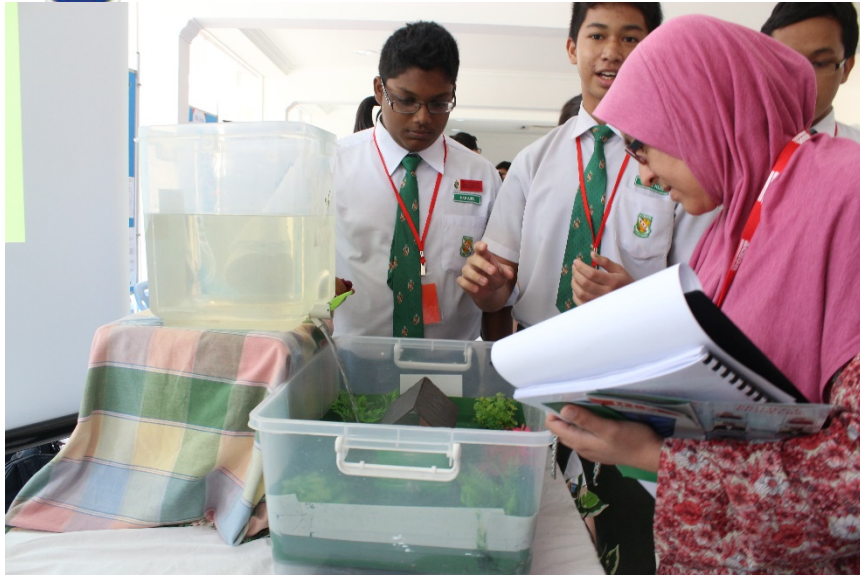


## No. of Collaboration :

| Local             | International |
|-------------------|---------------|
| 19                | 12            |
| <b>TOTAL : 31</b> |               |







## BEGIN Challenge







# ENGENIUS 2015

## Final Year Project Student Conference



| PLACES                  | NAME                   | FYP TITLE                                                                                                          |
|-------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>3 Gold Medals</b>    |                        |                                                                                                                    |
| 1ST                     | ZAFIRAH BINTI ZAKARIA  | An In-Socket Sensory System For Transfemoral Prosthetic Leg: Development And Efficacy Study                        |
| 2ND                     | TEE SIAU INN           | Microstructural Analysis Of Plant Pretreatment Techniques For Extraction Of Antidiabetic Compounds                 |
| 3RD                     | DARWEEN REZA BIN SABRI | Design and Development of An Open Modular Architecture Control Based Computer Numerical Control Controller Systems |
| <b>7 Silver Medals</b>  |                        |                                                                                                                    |
| <b>10 Bronze Medals</b> |                        |                                                                                                                    |

## THEN...WHAT HAPPEN..

- Students starts talking and discussing about their idea with the industries
- The industries start requesting the students to **solve real problems using innovative solution**
- For the first year...they did not win...but then...the students start having discussion with lecturers about their idea
- The school students have courage to explain about their prototype
- Lecturers are proposing projects involving multidisciplinary people and stakeholders



## **THEN...AT THE UNIVERSITY LEVEL WE HAVE**

- University of Malaya Centre of Innovation and Commercialization (UMCIC)





# FUND

|                       | Agency | Fund/ Scheme   | Suitable Applicant                                        | Quantum of Funding | Duration  | Links                                                                               |
|-----------------------|--------|----------------|-----------------------------------------------------------|--------------------|-----------|-------------------------------------------------------------------------------------|
| Pre-Commercialization | MOSTI  | TechnoFund     | Researchers & Inventors                                   | RM 3 million       | 30 months | <a href="#">Guideline Main Form Application Form</a>                                |
|                       |        | InnoFund       | Individuals                                               | RM50,000           | 12 months | <a href="#">Guideline Main Form Enterprise Innofund Form</a>                        |
|                       |        |                | Micro-businesses                                          | RM 500,000         | 12 months | <a href="#">Guideline Main Form Enterprise Innofund Form</a>                        |
|                       |        |                | Community Groups                                          | RM 500,000         | 18 months | <a href="#">Guideline Main Form Community Innofund Form</a>                         |
|                       | Cradle | U-CIP Catalyst | Researchers & Inventors                                   | RM 150,000         | 12 months | <a href="#">Application Guideline Online Form</a>                                   |
|                       |        | CIP 500        | Malaysian Companies                                       | RM 500,000         | 12 months | <a href="#">Application Guideline Online Form</a>                                   |
| Commercialization     | MTDC   | CRDF           |                                                           |                    |           | <a href="#">Application Checklist CRDF Commercialisation Plan</a>                   |
|                       |        | CRDF-1         | Spin-off companies from PPU/GRI                           | RM 500,000         | 24 months | <a href="#">Procedures Application Form</a>                                         |
|                       |        | CRDF-2         | Start-Up companies                                        | RM 500,000         | 24 months | <a href="#">Procedures Application Form</a>                                         |
|                       |        | CRDF-3         | a) Local R&D by SMEs<br>b) Public sector R&D by a non-SME | RM 4 million       | 24 months | <a href="#">Procedures Application Form</a>                                         |
|                       |        | TAF            | Small & Medium Enterprise (SME)                           | RM 2 million       | 24 months | <a href="#">Procedures Application Checklist TAF Business Plan Application Form</a> |
|                       |        | BSF            | Start-Up companies                                        | RM 5 million       | N/A       | <a href="#">Application Checklist Business Plan Application Form</a>                |



# SPIN OFF COMPANIES

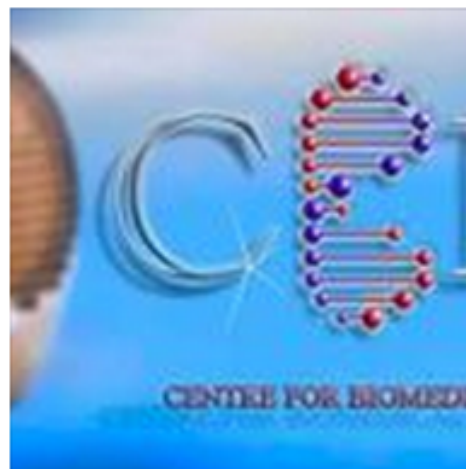




UNI  
OF  
KUALA



ce 1905''



## THEN AT THE UNIVERSITY LEVEL WE HAVE

- University of Malaya Entrepreneurship Centre (UMEC)





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[Who We Are](#)

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### 4 Entrepreneurial Labs

Formulated platform by UMEC in developing entrepreneurship skill among the students.



### Business Opportunity

Create a business opportunity for students to do a real business.



### Workshop

Provide knowledge and the skills needed to be a successful entrepreneur.



### Student Organization

All student that have same interest in entrepreneurship is gathered.



### Graduate Program

Encourage students participation in more dynamic programs.



### Competition

A platform for student to show their entrepreneurship talents.





# SO, WHAT DO WE THINK...

- We are not in the advanced stage in innovation and entrepreneurship...

BUT

- We are making small incremental steps in a right direction and this can make a big differences...

AND

- We are still validating either to give grade or not to give grade
- We are still looking for solutions on how to make one brain with two minds (innovator and entrepreneur)
- We are still looking for optimum solution for different layer of people



# Acknowledgement

- Dean: Prof. Ir. Dr. Noor Azuan Abu Osman
- Deputy Dean Offices
- Dr. Norrima Mokhtar
- Mr. Hafizal
- Second Residential College

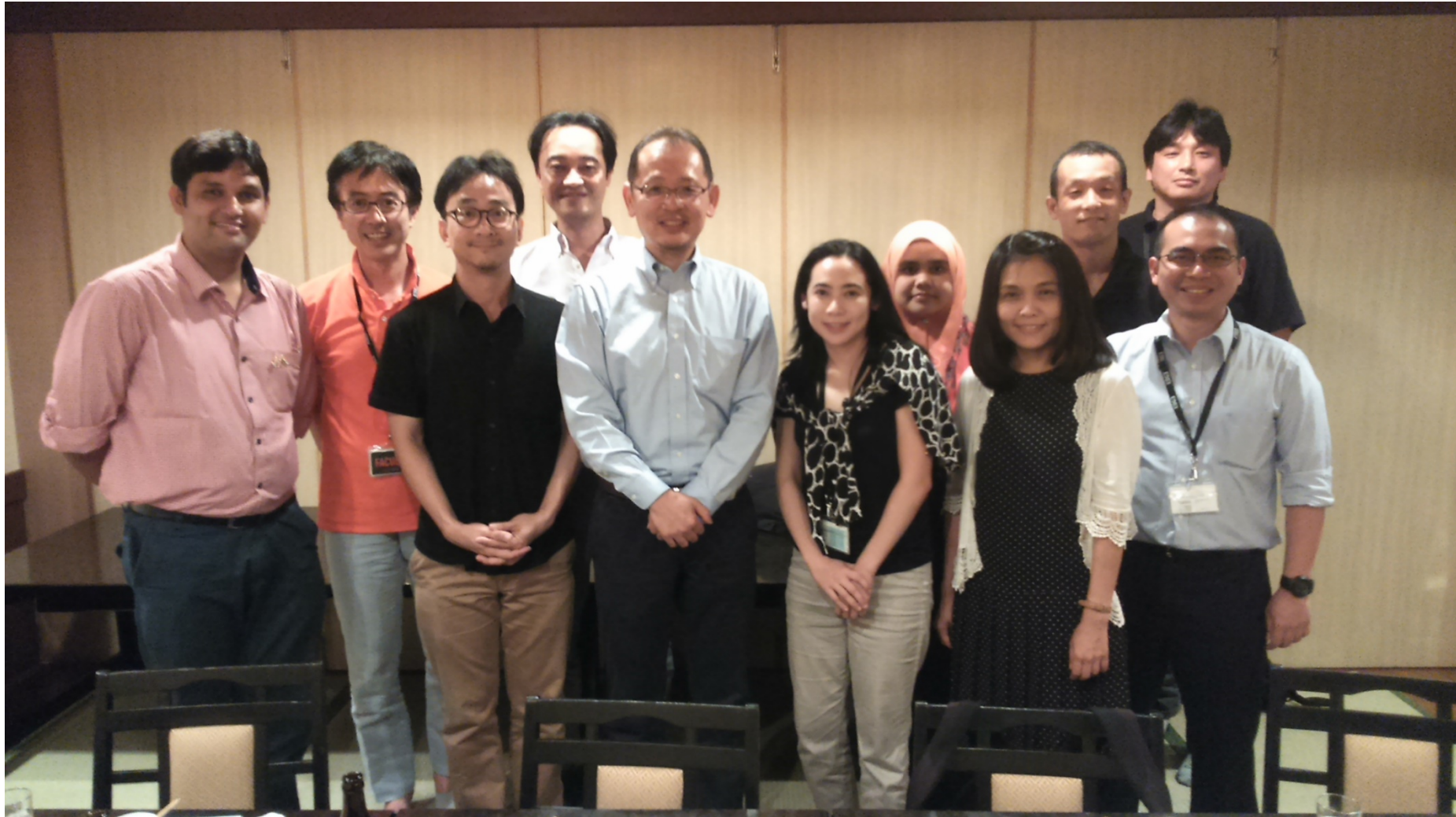




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- THANK YOU
- TERIMA KASIH

