



**UNIVERSITI MALAYSIA PERLIS**

**KNOWLEDGE SINCERITY EXCELLENT**

**ENGINEERING INVENTION**

**&**

**INNOVATION EXHIBITION**

**ENVEK 09**

**22 MARCH 2009**

**LAUNCHED BY:**

**Y. Bhg. Brig. Jen. Dato'  
Prof. Dr. Kamarudin Hussin**

**ORGANISED BY:**

**SCHOOL OF ENVIRONMENTAL ENGINEERING  
&  
STUDENT AFFAIRS & ALUMNI DEPARTMENT**

**IN COLLABORATION WITH:**

**DEPUTY VICE CHANCELLOR OFFICE  
(RESEARCH & INNOVATION)**

**&**

**ENGINEERING SCHOOLS OF UniMAP**

**“ENGINEERING FOR SOCIETY”**

## Aturcara Majlis

**Ahad, 22 Mac 2009**

- |             |   |  |
|-------------|---|--|
| 8.30 pagi   | - | Ketibaan peserta pertandingan ENVEX 09 |
| 9.00 pagi   | - | Proses penilaian produk oleh juri      |
| 3.00 petang | - | majlis perasmian penutup               |
| 5.00 petang | - | Majlis bersurai                        |

## Aturcara Perasmian Penutup ENVEX 09

- |             |   |   |
|-------------|---|---|
| 3.00 petang | - | Ketibaan tetamu jemputan  |
| 3.10 petang | - | Ketibaan ketua-ketua jabatan/ dekan   |
| 3.15 petang | - | Ketibaan pegawai-pegawai utama universiti   |
| 3.20 petang | - | Ketibaan Y. Bhg. Brig. Jen.<br>Dato' Prof. Dr. Kamarudin Hussin<br>Naib Canselor UniMAP dan Isteri              |
| 3.30 petang | - | Lagu WAWASANKU<br>Bacaan doa  |
|             | - | Ucapan perasmian penutup<br>oleh Y. Bhg. Brig. Jen.<br>Dato' Prof. Dr. Kamarudin Hussin<br>Naib Canselor UniMAP |
|             | - | Majlis penyampaian hadiah   |
|             | - | Lagu SEMANGAT UniMAP  |
| 5.00 petang | - | Jamuan minum petang   |
|             | - | Majlis bersurai   |

**Pakaian: Smart & Casual**

# Engineering Invention & Innovation Exhibition (ENVEX 09)

## Pengenalan

Pembangunan sesebuah Negara bersandarkan kepada pembangunan dan kemajuan ilmu pengetahuan rakyatnya, dan ini mampu direalisasikan dengan pembangunan, kemajuan dan penerokaan ilmu melalui penyelidikan. Atas sebab itu, PPK Alam Sekitar & Jabatan Hal Ehwal Pelajar & Alumni mengambil langkah proaktif dengan buat pertama kalinya menganjurkan program berlandaskan penyelidikan dan inovasi kepada pelajar-pelajarnya. Bidang penyelidikan bukan hanya diterokai oleh para pensyarah malah ingin diserapkan semangatnya kepada para pelajar. Justeru itu, program ini membantu merealisasikan impian menjana generasi muda yang mampu mengaplikasikan ilmu pengetahuan kepada bidang penyelidikan dan seterusnya membantu melahirkan generasi muda yang berfikiran kreatif dan inovatif. Program ini juga bertujuan untuk membuat pemilihan bagi mewakili UniMAP untuk pertandingan di peringkat kebangsaan.

## Objektif

1. Memberikan pendedahan awal tentang bidang penyelidikan kepada para pelajar.
2. Sebagai platform untuk membuat pemilihan bagi mewakili universiti di peringkat kebangsaan.
3. Memberikan pendedahan kepada aktiviti tambahan 7 Pillers iaitu *innovation (i)*.
4. Memberikan galakan kepada pelajar melakukan penyelidikan dan menghasilkan produk.
5. Memupuk semangat kerjasama dan berpasukan di kalangan pelajar.

# Kategori Anugerah

## Anugerah Khas Kategori

(Wang tunai RM 500 • piala pusingan • sijil penyertaan)

Kategori A: Mechanics • Engines • Metallurgy • Machinery • Tools

Kategori B: Computer Science • Video • Telecommunications

Kategori C: Electronic Technology

Kategori D: Building • Civil Engineering Construction • Materials •  
Woodwork

Kategori E: Electrical Technology

Kategori F: Environment • Energy • Water

Kategori G: Biotechnology • Agriculture

## Anugerah Khas Industri

Special Award ADV ENVEX 2009

ENVIRON Special Award 2009

## Johan Keseluruhan – Best Invention & Innovation Award

(Wang tunai RM 1000 • piala pusingan • sijil penyertaan)

## Anugerah Booth Paling Menarik

(Wang tunai RM 500 • piala pusingan)

## Anugerah Pingat

Pingat Emas

Pingat Perak

Pingat Gangsa

PPK Komputer & Perhubungan

1. Bluetooth Wireless Network Authentication Using RFCOMM Protocol  
Mohd Faizal B. Mohd Norizam

2. Development an Algorithm of Bluesnarfing for Bluetooth  
Saratha AP Batumalai @ Candi

3. Wireless LAN Network Planning Using Open Source GIS Software  
Liong Zhong jin • Alvin Ting Kee Ngoh

4. Car Park Occupancy Information System  
Syazwan bin Abdullah Sani

5. KIOSK-Video Conferencing  
Mohamad Hasyim bin Mohd Yusoff

7. Home security and Energy Saving System Using Wireless Zigbee  
Wong Kok

PPK Mekatronik

8. EMG Sensor Head-Set to Detect and Alert Driver in Drowsiness  
Lim Jin Chow • Bonaventure Jay Kheng Liang



## PPK Komputer & Perhubungan

1. **Bluetooth Wireless Network Authentication Using RFCOMM Protocol**  
*Mohd Faizal B. Mohd Norizam*
2. **Development an Algorithm of Bluesnarfing for Bluetooth**  
*Saratha A/P Batumalai @ Gandi*
3. **Wireless LAN Network Planning Using Open Source GIS Software**  
*Liong Zhong Jin · Alvin Ting Kee Ngoh*
4. **Car Park Occupancy Information System**  
*Syazwan bin Abdullah Sani*
5. **KIOSK- Video Conferencing**  
*Mohamad Hasny bin Mohamad Esa*
6. **Bus Trip Monitoring System**  
*Abdul Malek bin Kathar Ismail · Mohamad Firdaus b Hanapiah · Nor Rafidah bt Mohd Nasir*
7. **Home Security and Energy Saving System Using Wireless Zigbee**  
*Wong Kok Fei*

## PPK Mekatronik

8. **EMG Sensor Head-Set to Detect and Alert Driver in Drowsiness**  
*Lim Jin Chow · Bonaventure Tay Kheng Liang*

9. **Blind Man's Navigation Robot**  
*Allan Melvin a/l Andrew • Prabu A/L Balasundaram*
10. **DNK- Wall Painting Robot**  
*Loo Tee Khwing • Chong Chee Khai • Lye Jing Yiau*
11. **ROOMBOT- A Housekeeping Robot**  
*Sim Kwoh Fung • Vivian Tang Sui Lot • Lam Chee Kiang • Poo Tarn Shi*
12. **Hybrid Power System Using Petrol Engine and HHD Fuel Cell Kit for Outdoor Robot**  
*Ameetnash Ram a/l Kertara Ram*

## PPK Alam Sekitar

13. **Coconut Coir Brick**  
*Tan Boon Jye • Ng Chia Ling • Lim Pei Ling • Chan Shan Chuan*
14. **S.E.D.A.P (Safe, Environmental Friendly, Degradable, Authentic Paper)**  
*Soon Kuok Hau • Nik Noor Athirah Nik Yusoff • Khiew Siew Kung • Nur Aziemah bt Abd Rashid*
15. **Agriculture Waste Based Water Filter**  
*Mohd Zulhasif Mokhtar • Nor Aisyah bt Hj Mohd • Fatin Safwanah bt Jamaruddin • Nur Nadia bt Sidi Omar*
16. **Multipurpose Bunch Box (MBB)**  
*Muhammad Hafiz Abdul Rahim • Muna 'Amirah Mohamad • Nurafiza Awang • Nurul Farhah bt Ismail*
17. **Sugar Cane Husk as Heavy Metal Absorbent**  
*Afifi bin Akhbar • Alice Dandun a/p Gona • Yagaes a/p N. Shahmuganathan • Mohd Naim bin Mohd Nor*

18. **Smoke N Go**  
*Masita Che Omar • Nur Hazirah Mohd Ridzwan • Izzati Syazwani  
 Ahmad Talat • Thinakaran Subramaniam*
19. **Hybrid Parquet**  
*Ahmad Shahrman Hibadullah • Mohamad Amru bin Mustafa •  
 Mohd Khairul Aizat bin Mohamed • Mohd Hafizam bin Hussin*
20. **Edifice Absorb Temblor**  
*Haris Haroon • Khoo Dei Xiong • Prakash A/L Jeyamani • Show Bor  
 JIunn*

## PPK Mikroelektronik

21. **Nanostucture Formation for Nanoelectronic Device**  
*Nur Atiqah binti Mohd Yahaya • Nurul Nadia binti Azmi*
22. **Electronic Band Structure Modeling of Silicon**  
*Sharifah Elly Nadia binti Syed Abdullah • Noratiqah binti Abdullah  
 • Tiong Chiong Min*
23. **Porous Silicon Based Gas Sensor**  
*Siti Aishah Bt Saibani • Siti Nurol Akma • Wan Nur Amalina Wan  
 Ismail • Nur Fatiha Nafi*
24. **Electronic Dictionary Using Visual Basic**  
*Arief Affendii Juri*
25. **Nano Capacitor for Bio Medical Application**  
*Husnul Azhan binti Mohamed • Muhamad Emi Azri b Shohini*
26. **A Part of Electronic Study of SI**  
*Zarra Farahdinnah Esmarelda Jaafar • Farah Wahida Abd Hadi •  
 Nurin Nurhane binti Jamil • Siti Noor Ashikin Adzmi*



27. **Structural & Electrical Study of Barium Strontium Titanate (BST) Doping with Indium Oxide (BIST) in Application as a Light Sensor**  
*Norzahiyah binti Nordin*
28. **The Design and Simulation of a Test Circuit Using Design for Testability (DFT) Technique**  
*Muhammad Afif Khalid*
29. **LISFET**  
*Asma Sahirah Ramli • Noorsakinah Abu Bakar • Nor Adila Johari*
30. **ISFET**  
*Nor Adila binti Johari • Asma Sahirah bt Ramli • Noorsakinah bt Abu Bakar*
31. **MPEG-4 / H-264 Video Compression Coding**  
*Shaili Falina bt Mohd Sukri • Nur Saliza bt Ruskamarane • Nurul Nadia bt Manap*

## **PPK Pembuatan**

32. **Design and Fabrication of Indoor Human Transporter**  
*Kok Wei Zet*
33. **Design of ECO-Friendly Hand-Held Fan**  
*Kok Wei Zet • Tan Chong Ming • Ng Siau Ling • Goh Chee Chia*
34. **Fluidized Bed Combustor for Agricultural Waste**  
*Dina Izzati binti Hashim • Liha Md Amin • Nor Fariza Reduan • Mohd Shahrull Abdullah*
35. **Smart Mapping System**  
*Mohd Ameer Jamil • Ang Eng Tatt • Muhammad Faris b Zainal Abidin • Khairunnisa binti Othman*

36. **Flip Plastic Hinge Technology for Spreader**  
*Dennis Desmond Surin • Siti Zubaidah binti Mat Daud • Nur Afifah bt Zakaria • Mohd Haniff bin Hazmin*

37. **Pulse Combustion Tray Dryer**  
*Dina Izzati binti Hashim • Puteri Zirwatul Nadila bt Megat Zamanhuri • Liha Md Amin • Nor Fariza Reduan*

## PPK Bioproses

38. **Application of Effective Microbe and Designated Reactor in Biocomposting**  
*Muhammad Hazriq Bin Aris • Nuridrin b Rosni • Randy bin Ramli • Mohd Amir Idzhuan Johari*

39. **EzHeart-Utilization of Waste Fluid Grease for Biodiesel Production**  
*Adib Zubaidi Bin Rashid • Izzat bin Shaharuddin • Siti Faezah binti Shukri • Suraya binti Mohd Tajuddin*

40. **Bioethanol Production Using Spent Sawdust from Mushroom Cultivation**  
*Abdul Malek bin Abdullah • Nor Hidayah binti Othman • Nor Adila binti Ramlee • Nor Hidayah binti Bohari*

41. **Friendly User Sterilizer Device**  
*Muhammad Najib bin Abdul Wahab • Nurul Nadia binti Mohamed Supian • Mohd Zakwan bin Nawawi • Lai Moon Ting*

42. **Aqua Water Filtration System**  
*Mohd Redzuan Sutimin • Nor Munirah bt Che Othman • Nurfatimah bt Mohd Thani • Siti Nur Amirah bt Idris*

43. **Landscaping Design for Natural Aromatherapy in Campus Life**  
*Mohd Rozaimi Ramly • 'Adilah Che Sulaiman • Kelly Liew Kar Mee •  
Nadia binti Anwar*

44. **Green Billboard**  
*Yap Phooi Pung • Ng Wen Jia • Solihah binti Abdullah • Nor Hanim  
binti Sha'ari*

## **PPK Sistem Elektrik**

45. **Design and Development 500W 12Vdc To 240Vac Inverter**  
*Mohd Sufi Abdul Rahman*

46. **Development of a 135W Single-Phase Induction Generator With  
240Vac Output**  
*Goh Chen Ling*

47. **Switch Mode Power Supply with Power Factor Correction for  
Personal Computer (SMAS)**  
*Yew Been Seok • Tan Aii Ling*

48. **Short Term Load Forecasting Using Time Series Technique**  
**Methane Tank Collector**  
*Muhammad Iqmal Mad Yusof • Noor Shahida bt Jamos*

49. **Stepper Motor Controller with Angle Rotation Display**  
*Mohd Dimyati bin Haji Mohd Sadri*

## **PPK Bahan**

50. **Palm Ash and PCB Waste as a Brake Pad Material**  
*Alida Abdullah • Asma Kamarul Asri • Nurul Razliana Abdul Razak*

51. **Characterization of Zn-Alloy Cast Product with Different Composition of Silicate Sand and Bentonite in Green Sand Mould**  
*Nurehan Syamimi bt Ismail*
52. **Natural Filler Cement Composite Board Containing Polymer**  
*Mohd Azmi bin Mohd Arif*
53. **Properties of Natural Fiber from Typha Latifolia / Polystyrene Composite Panel**  
*Nurul Razliana bte Abdul Razak • Asma bte Kamarul Asri • Alida Abdulah*
54. **The Processing and Characterization of Ceramic Matrix Composite (CMC) of Feldspar and Aluminium at Elevated Temperature and Comparison with Calcine Ceramic Powder**  
*Farhana bt Mohd Foudzi • Farah Farhana Zainal • Norazrina Mat Jali*
55. **Recycling of Aluminium Can**  
*Mohamed Iylia Anwar Bin Che Mohamed Hussein*
56. **The Binary Alloy of Aluminium-Magnesium Product**  
*Jaytarshenee a/p Gunalan • Adila Maisarah Mansor • Tiah Wei Chuen • Ahmad Shafiq b Ab. Salam*
57. **Banana Fiber Particle Board Composite**  
*Pang Ai Ling*
58. **CD-R Waste Recycling Process : Ultrasonic Separation Process of Gold**  
*Azliyana Binti Ahmad*
59. **Kenaf : Green Furniture**  
*Ahmad Fikri Hadi bin Abdul Rahman • Muhd Yusri bin Rosli • Mohd Yuzwan bin Yusoff*

60. **Bricket from Biomass**  
*Liew Khe Yhin · Mohamad Nur Fuadi bin Pargi · Saiful Lizan Yusof ·  
Devi Shantini A/P P. Chandrasakaran*
61. **Production Paper from the Recycled News Paper**  
*Tan Kim Seah · Rachel Chong Ming Chuen · Zawawi · Noor Asyiela*
62. **Biodiesel**  
*Tuan Mohd Arif Al Junaidi Tuan Ahmad · Feng Di Sheng · Tan Kok  
Chow · Nor Hamizah binti Said*
63. **Handmade Paper Process**  
*Jonree Joseph*
64. **Green Concept Cane Board**  
*Muhamad Izzazi b Zulkifli · M. Radzi Ali*

# Jawatankuasa Program

## Penaung

*Y. Bhg. Brig. Jen. Dato' Prof. Dr. Kamarudin Hussin*

## Penasihat Kehormat

*Y. Bhg. Prof. Dr. Zul Azhar Zahid Jamal*

## Penasihat Program

*En Razli Ahmad*

*Dr. Khairul Nizar Ismail*

## Pengarah Projek

*En. Mohd Mustafa Al Bakri Abdullah*

## Timbalan Pengarah

*Cik Azlinda Abdul Ghani*

## Setiausaha

*Pn. Fazlina Md. Fadzil*

## Bendahari

*En. Ku Ishar Hj. Ku Ariffin*

## Sekretariat Pusat Pengajian

*Pn Rohani S. Mohamed Farook*

*Mohamad Halim Ad. Wahid*

*En Rosnazri Ali*

*En Badrul Azmi Abdul Holed*

*Cik Khairul Farihan Kasim*

*Cik Mahyun Ab Wahab*

*En Muhammad Juhairi Aziz b. Safar*

*En Suhardy Daud*

# Ahli Jawatankuasa

- Jawatankuasa Teknikal & Fizikal** : En. Mohd. Hakam Hassan  
En. Mohd Shahril Mukhriz
- Jawatankuasa Penyertaan** : Pn. Naimah Ibrahim  
Pn. Norazian Mohamed Noor  
Cik Ain Nihla Kamarudzaman  
Cik Nabilah Aminah Lutpi  
Cik Masitah Hassan
- Jawatankuasa Cenderahati** : PM Che Mohd Ruzaidi Ghazali  
En Faizul Che Pa
- Jawatankuasa Tugas-tugas Khas** : Pn. Salwa Mohd Zaini Makhtar  
En. Wan Mohd Sabki  
En Salsuwanda Dato' Selamat
- Jawatankuasa Sambutan & Protokol** : En Che Zulzikrami Azner Abidin  
Pn. Ayu Wazira Azhari  
En. Umar Kassim
- Jawatankuasa Promosi** : En Mohd Izwan Izhar Haris
- Jawatankuasa Siaraya & PA Sistem** : Pn Noor Aziana Iberahim
- Jawatankuasa Kolej Kediaman** : Cik Norharnila Rusli  
Cik Nur Fadzliah Othman
- Jawatankuasa Makanan** : Pn. Fazlina Md Fadzil
- Jawatankuasa Keselamatan** : En Mohd Hairi Osman  
En Nordin Harun
- Jawatankuasa Pameran** : Cik Azilawati Suanda  
En. Mohd Najib Othman
- Jawatankuasa Juri** : En Irma Azqrai Nin Sey Muhamad  
En Asmadi Othman
- Panel Juri** : Dr Zuraini Dahari  
Ir. Dr. Cheong Kuan Yew  
Dr Mohd. Salman B. Abu Mansor  
Dr Samayamutthirian @ Thilagan A/L  
Palaniandy  
Dr Azura Bt. A. Rashid  
Dr. Vel Murugan Vadivelu  
Dr. Widad Ismail