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AL-MAJALLAH WON NATIONAL BOOK AWARD 2015

By: Shalfarina Shaminan

A book about Islamic financial institute written the late Prof Dr Abd Jalil Borham won the best general book under the law category of the National Book Award 2015.

The book, Al-Majallah : Panduan Syariah Institusi Kewangan Islam (Al-Majallah: Islamic Financial Institute Syariah Guideline), which was full of substance, informative and has a structured style of writing deserved the win.

It is about regulations and laws of syariah-compliant Islamic financial institutions.

It is also the last book written by the late Prof Dr Abd Jalil.

The publisher director Associate Prof Dr Mohd Ghani Awang said the book was developed from the Panduan Syarak (Syarak Guidelines) of the Bank Pembangunan Malaysia Berhad (BPMP) Syariah Committee and Johor Ahkam Magazine: Johor State Government Islam Civil Law Code 1331H/1913M.

He added that the two documents had been preserved and well-kept by the late Prof Dr Abd Jalil. "The book is an effort by Allahyarham to make reading easy and simple to understand by detailing the contents contained in the Majallah al-Ahkam-al `Adliyyah, written during the Othmaniyyah era.

"Allahyarham had romanised all the contents from the Majallah which was written in Jawi and created sub-topics for every single volume so readers can understand the subject matter," he said.

Prof Dr Mohd Ghani added that the book was suitable to be used as a research and reference text for researchers, students, Islamic banking institutes, Security Commission and takaful.

He said the win was also a showcase of the capability of local lecturers in producing quality books and those that were beneficial to the general public.
Universiti Malaysia Pahang (UMP) won big at the International Invention Conference and Exhibition 2015 (PECIPTA 2015) which positioned the university among the best universities with its scores of five gold medals, three silver medals and three bronze medals. PECIPTA 2015 was held in Kuala Lumpur Convention Centre (KLCC) on December 4-6, 2015.

The five gold medals were contributed by Associate Prof Dr Muhammad Nubli bin Abdul Wahab (PBMSK) with his research work titled, ‘Bio Transform’, Dr Mohd Hasbi bin Ab Rahim (FSTI) for his research work, ‘Novel Fuel Additive Chemical from Oil Palm Sap’, Prof Dr Jose Rajan (FSTI) for his project, ‘World First Nano-rod based Solar Module: Materials Fancy Goes Reality’, Prof Dr Kamal Zuhairi bin Zamli (FSKKP) with his research work, ‘TBat: A Novel Strategy For Minimisation Of T-Way Interaction Test Suite Based On The Particle Swarm Optimization and The Bat Algorithm’ and Dr Zamzuri bin Hamedon (FKP) with his work titled, ‘Multi-Axial Clamp Assemble For Compound Fracture of Bone’.

An industrial partner for Dr Mohd Hasbi had already been identified and that his product had entered into the pre-commercialisation stage. Dr Mohd Hasbi’s goal was to have the product used in the oil palm industry.

As for Prof Dr Jose Rajan, his focus was to commercialise his product in the solar industry because the industry was currently developing rapidly in Malaysia.

Dr Zamzuri of FKP’s product had huge potential in the field of medical aid and support equipment.

It was also noted that Prof Dr Kamal and Associate Prof Dr Muhammad Nubli had obtained the copy rights for their research products which focused on ICT and psychological development.

UMP’s silver medals were contributed by Prof Dr Abdurahman Hamid Noir (FKKSA) for his work titled, ‘A Novel Technique of Ultrasonic Membrane Anaerobic System (UMAS) in Treating Wastewater’, Dr Lakhveer Singh (FTEK) for his research in ‘Nanoparticles of Metal Drivers for Conversion of Wastewater to Electricity in Microbial Fuel Cell’ while Dr Nina Suhaity binti Azmi (FSTI) got her silver for her work titled, ‘Glycojoint: Halal Relief of Pain for Exercise Injuries and Age Related Cartilage Degenerations’.

The bronze medallists comprised two from Faculty of Chemical and Natural Resource Engineering (FKKSA) - Associate Prof Dr Jolius Gimbon for the work on ‘Functional Food From Orthosiphon Staminesis’ and Associate Prof Dr Hayden A. Abdul Bari for his work, ‘Insoluble Additives for Enhancing the Blood Flow in Clogged Streams’. The other bronze medal was from Faculty of Industrial Science and Technology (FSTI)’s Dr Essam Abdellatif Makky and the work on ‘Bio-economy of Food Waste for Cancer Control’.

PECIPTA 2015 was held over three days and was officially closed by Higher Education Minister YAB Dato’ Seri Idris bin Jusoh who also gave away prizes to the winners. A total of 495 entries were submitted in PECIPTA 2015.
UMP APPOINTED BY **MARA** TO CONDUCT Halal Gelatine Project

By: Laili Zulkepele

Universiti Malaysia Pahang (UMP) was appointed by federal agency Majlis Amanah Rakyat (MARA) to carry out a halal gelatine production project worth RM20 million at ITECS, UMP Pekan.

It would also serve as a project where a business incubator could be established and entrepreneurs groomed.

The project would be developed on a four acre of land and would create job opportunities to graduates of the university, provide industrial training and tests for other products such as keratin.

The project was expected to complete in two years after a memorandum of understanding was signed on August 10, 2015.

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AN INTRODUCTORY SEMINAR ON **KARAS AS THE RESOURCE TO PRODUCE SANDALWOOD OIL**

BY: PUTRA MOHD DARUL RIDZUAN ROSLI

A seminar on karas was held at Auditorium Room, Universiti Malaysia Pahang (UMP) Gambang campus on October 28, 2015. The seminar was held as karas was seen as a new economic potential in Malaysia.

The programme was organised by UMP’s Centre of Excellence for Research in Bio-Aromatic. The topic attracted the attention of its participants comprising representatives from the industry, researchers as well as undergraduates studying about karas or also known as gaharu.

Gaharu is a natural product of the forest that has high commercial value. Following the pathogenisation process, karas will react to produce resin to create gaharu wood. The resin has aromatherapy and pharmaceutical values and is sold in wood form, essential oil and gaharu tea.

The seminar was a platform for gaharu enthusiast Prof Dr. Baharuddin Salleh, a former lecturer with Universiti Sains Malaysia (USM). He shared his experience and knowledge about pokok karas, right from planting until the quality control stage as well as the product produced and its niche in global market.

Gaharu-related industries also put up displays about their products and the organiser hoped that the seminar had been a fruitful one, benefitting not only the industries but had also helped to expand networking and improve communication.
Universiti Malaysia Pahang (UMP) and Sabah-based company, Gaya Natural Sdn. Bhd., will be working together to establish the patchouli oil industry in Pahang.

UMP is now developing the Pahang Bio-Aromatic Park on a 180-acre of land in Maran where aromatic herbal plant-related research can be carried out systematically and comprehensively. It will also help to boost the development of herbal-based technology and natural products in Pahang.

Gaya Naturals Sdn. Bhd. is one of the world’s major patchouli oil producers. The company is committed to work together with UMP and will share its knowledge and experience. It is set to provide assistance to UMP in starting the patchouli oil project in Pahang Bio-Aromatic Park.

The collaboration will involve Gaya Naturals Sdn. Bhd. supplying seedlings to plant the patchouli trees, selling and marketing of the patchouli oil and manufacturing of downstream products, as well as providing consultation services.

It is hoped that the collaboration will help to enhance participation from the public sector and the people as well in making agriculture a more developed sector especially in the areas such as aromatic herbal where sound synergy can be forged and resources optimised.

With the capability of the existing institutions, objectives set out in plans to industrialise the agriculture sector can be met. These synergies can become the catalyst and an integrated platform for the various business components for the aromatic herbal agriculture activities to flourish.

It can increase supply and demand and encourage the growth of social capital as well as enhance national competitiveness in the global network economy.
Universiti Malaysia Pahang (UMP), Grasse Institute of Perfumery (GIP) of France and Malaysian Biotechnology Corporation (BiotechCorp) signed a Memorandum of Collaboration (MoC) that would pave the way to forming an academic programme relating to agriculture, flavour, fragrance and colouring which would carry certification by UMP and GIP.

The MoC was signed by UMP Vice Chancellor Prof. Dato’ Dr. Daing Nasir Ibrahim, GIP President Mr Phillip Masse and BiotechCorp Chief Operating Officer Mr Razwin Sulairee Hasnan Termizi on October 12, 2015.

This is Malaysia’s first academic collaboration in flavour and fragrance with GIP, the world’s renowned perfumery institution. The collaboration is part of a focused effort by BiotechCorp and UMP in developing an ecosystem for bio-aromatic which comprises flavour and fragrance cluster in Pahang.

It will recruit and enhance local talents through the programme. The programme is also aimed at realising the goal of turning Malaysia as ASEAN’s main hub in the formulation of signature fragrances and flavours.

It also aims at penetrating the halal markets while further boosting the bio-economy of the country. Grasse, the birthplace of the world’s perfume industry, remains an essential focus for the international market of aromatic products. There are more than 60 companies producing raw materials, flavours and fragrances, employing almost 3,000 workers. These firms generate over 50% of the France’s revenue and nearly 6% of the world's turnover.
UMP RESEARCHERS’ STERLING PERFORMANCE IN BRITISH INVENTION SHOW 2015

By: Hazlina Faizal

Three researchers from Universiti Malaysia Pahang (UMP) made name for themselves at the international arena when they won numerous special awards and gold medals in the British Invention Show (BIS) 2015 which was held at the Barbican Exhibition Centre, London.

They were Dr. Chong Kwok Feng and Dr. Gaanty Pragas from Faculty of Industrial Sciences and Technology and Noraniza Samat from Faculty of Computer System and Software Engineering.

Dr. Chong’s research work ‘Energy Storage Supercapacitor from Bio-waste (UMP Acitor)’ won the most honours – a gold medal and three special awards in the Environment Award category.

Not to be outdone by Dr. Chong’s impressive achievement, FSTI’s Dr. Gaanty took home a gold medal and two specials awards in the Best International Innovation for the industry and innovation category. Dr. Gaanty’s work was titled, ‘High Throughput Bio-diesel Yielding Catalyst from Industrial Waste’.

Lecturer Noraniza also won a gold medal and a special award under the Environment Award for the Natural Earth category for her work, ‘Augmented Reality (AR) Science for Kids (ARKids)’.

UMP TASKED WITH SCIENTIFIC STUDY ON FLOOD MANAGEMENT

By: Putra Mohd Darul Ridzuan Rosli

The Ministry of Higher Education awarded the Fundamental Research Grant Scheme (FRGS) of RM51,200 to Universiti Malaysia Pahang (UMP) on April 1, 2015.

UMP was tasked with a research titled, ‘Urbanisation and Industrialisation: A Teaching Learning Based Optimisation Algorithm For Efficient Routing Of The Emergency Flood Evacuation Process’ led by the university Research Dean Prof. Dr. Kamal Zuhairi bin Zamli.

The research would focus on the condition during floods and would use algorithm to determine the most optimum means in the course of evacuation process and rescuing victims.

A workshop was specially held to thoroughly discuss the matter and was conducted with the cooperation of the Vice Chancellor’s Office and Department of Research and Innovation.

Researchers from various responsible centres attended the UMP FRGS Flood Management and Flagship Workshop which was aimed at pooling together researchers into a team and for them to collectively gather relevant data and information so improvements could be made.

The workshop was held in Swiss Garden Hotel on Oct 29 and 30, 2015. There were many new ideas contributed by the researchers who came from different disciplines and backgrounds.

At the end of the workshop, Prof. Dr. Kamal Zuhairi said he hoped that the discussions on the matter would continue and that more grants of higher amount could be obtained such as the Ministry of Science, Technology and Innovation (MOSTI) Flagship Grant and the international grant of Science and Technology Research Partnership for Sustainable Development (SATREPS) from the Government of Japan.
MyGIFT PROGRAMME: AN INITIATIVE TO GENERATE INCOME

By: Hazlina Faizal

The endowment fund or wakaf is a form of fund channelled by individuals or private companies that are interested in making financial contribution to institutes of higher learning and is meant for the development of education. The contribution can be utilised for education development activities that received collective approval.

A university that has a huge endowment fund is an attraction for outstanding students, by way of scholarship. A huge endowment fund can also allow the university to have various activities and set up research and education infrastructure.

The endowment fund is one of the initiatives to generate income initiated under the Key Result Area 2 (KRA2) of the Financial Sustainability, as stated in UMP Strategic Plan 2011 – 2015. The initiative is known as MyGIFT. It is mainly to provide financial aids to selected undergraduates as well as to carry out charity works and community activities.

The fund for the selected activities are categorised as listed below:

- Kursi Endowment
- Sponsorship and Laboratory Facility Endowment
- Student Scholarship Endowment
- Ramadhan Fund
- Mosque Fund
- Wakaf Fund
- Disaster Fund
- Community Fund
- Non-Syariah Contribution Fund

In a bid to ensure the success of MyGift, a workshop was held that explained about the policy, promotional strategy and procurement of fund. It was held for three days at The Royale Bintang, The Curve in Damansara, from August 14-16, 2015.

A total of 13 promotional strategies and 17 fund procurement strategies were drafted and implemented, and these were monitored by Department of Corporate Affairs and Quality (JHKK).
LIST OF SEMINARS/TRAININGS BY CENTRAL LABORATORY

By: Siti Nurfashiha


Date: August 21, 2015.
Venue: Tun Fatimah Hall.
Participant: 53 (internal and external)
Project value: RM3,180
Objective: The aim is to inform users about the HPLC (High Performance Liquid Chromatography) instruments comprising the principles, theory, column and maintenance as well as sample preparation using Solid Phase Extraction (SPE). It is carried out with the cooperation of Research Instrument (RI) Sdn. Bhd.
Speaker/Trainer: Ms Chew Won Chin of RI Sdn. Bhd.

2. ICPMS BASIC OPERATION & TECHNIQUE TRAINING (2 DAYS)

Date: September 21 and 22, 2015
Venue: ICPMC Laboratory and Preparatory Laboratory
Participant: Two (Fishery Research Institute, Penang)
Objective: The aim is to provide theory and practical knowledge on sample preparation procedure using Microwave Digester and ICPMS (Inductive Couple Plasma Mass Spectrometer) instrument. Participants are also briefed about the maintenance aspect of ICPMS instrument and Microwave Digester.
Project value: RM 3,560
Speaker/Trainer: En. Rafie bin Rosly (Science Officer C41, Centralised Laboratory) and Pn. Nor Hafizah binti Zainal Abidin (Science Officer C44, Centralised Laboratory)

3. HPLC BASIC OPERATION & TECHNIQUE TRAINING (2 DAYS)

Date: October 21 and November 18, 2015
Venue: HPLC and Meeting Room, Centralised Laboratory
Participant: 11 (Undergraduates of third year and fourth year, FIST)
Objective: The training is a joint effort of ICoE and Faculty of Science and Industrial Technology. The aim is to provide theory and practical knowledge to the undergraduates. They are also given the opportunity to handle the instrument under the supervisions of the trainers and briefed about problems that normally occurred when handling the device.
Speaker/Trainer: Pn. Siti Nurfashiha bt Mohd Yasin (Science Officer C41, Centralised Laboratory) and En. Rafie bin Rosly (Science Officer C41, Centralised Laboratory).

4. THE THEORY AND PRACTICAL OF NMR

Date: November 5 and November 19, 2015
Venue: NMR Laboratory, Centralised Laboratory
Participant: 60 (FIST Undergraduates)
Objective: a) explanation on the theory aspect of the Nuclear Magnetic Resonance (NMR) sample preparation procedure and operation b) providing direct exposure on NMR instrument
Speaker/Trainer: Pn. Nor Hafizah bt Zainal Abidin (Science Officer C44, Centralised Laboratory) and En. Aimi Ilmar bin Ramli (Science Officer C44, Centralised Laboratory).

5. FOOD LABELLING SEMINAR 2015

Date: December 1, 2015
Venue: Tun Fatimah Hall, UMP
Participant: 37 (internal and external)
Project Value: RM3,700
Objective: It is aimed at providing information on the right food labelling technique as required under the Food Act 1983 and Regulations of Food 1985. It will enhance the food producer’s understanding on food labelling laws. Among them are listing the food product and ingredients, labelling of the food nutrition, claims on the benefits of the food, side-effects to health and methods of preparation
Speaker/Trainer: Dr Muhammad bin Ibrahim (Department of Nutrition Sciences, Kulliyyah of Allied Health Sciences, IIUM) and Pornima A/P Karpayah (Food Technology Officer C44, Kuantan district health office).
<table>
<thead>
<tr>
<th>NO.</th>
<th>PROJECT TITLE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cloud Service for MyGrants System</td>
<td>MyGrant Portal System is an information platform relating to DPF – a system which comprises the schedule for grant opening, guideline and networking. IBM CoE is appointed to carry out maintenance work of MyGrants System for 2015 and putting the Service Project as one of the contract researches in Universiti Malaysia Pahang.</td>
</tr>
<tr>
<td>2.</td>
<td>Production of the Dashboard and Video System Project and MyOAS Promotional System</td>
<td>The Aptitude Self-Assessment System (MyOAS) is a project implemented under KPM Graduate Grant (GE Grant). IBM CoE is tasked to lead the programme which is jointly carried out with MyOAS Team. The programme is held in public universities nationwide, focusing on preparing the graduate aptitude assessment mechanism in Malaysia. It is also aimed at helping to boost the graduates’ marketability in areas of their interest.</td>
</tr>
<tr>
<td>3.</td>
<td>Web Development Training Using HTML5</td>
<td>This programme is a training course planned by ICoE ICT Cluster and IBM CoE, providing exposure to public university lecturers in Sabah and Sarawak on web development using HTML5 and CSS3. It is conducted in Universiti Malaysia Sarawak (Unimas).</td>
</tr>
<tr>
<td>5.</td>
<td>Developing the Asar Font Keyboard Soft Application for iOS and Android</td>
<td>IBM CoE has teamed up with Language and Humanity Science Centre to develop the Asar Font Application for iOS and Android as well as for Chrome OS and Mac OSX. The aim is to provide exposure and introduce the use of Jawi writing for the keyboard.</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>7.</td>
<td>SAP Training for FIM undergraduates</td>
<td>IBM CoE conducted SAP training for undergraduates of Industry Management Faculty, comprising two sessions on October 10 and 11, 2015 and November 21 and 22, 2015 at IBM CoE laboratory. A total of 43 participants took part where they learned about adding values in business and needs of current market.</td>
</tr>
<tr>
<td>8.</td>
<td>Linux Administration Course for RMAF</td>
<td>IBM CoE jointly held a LINUX administration course with FSKKP for 10 RMAF officers on August 3-7, 2015. The officers are based at the RMAF in Batu 10 Camp, Kuantan. The training was aimed at adding value to the skills of the participants in matters relating to assembling, configuring and handling of Shell Command and Vi Editor. It was held IBM CoE Laboratory.</td>
</tr>
</tbody>
</table>
9. Creating Android Application for English Language used in Technical Communication

IBM CoE, together with lecturers from the Language and Humanity Science Centre has developed an application for Android and iOS for English Language used in Technical Communication. It is to improve teaching and learning at the faculty.

10. Creating iOS application for English Language used in Technical Communication

IBM CoE and lecturers from the Language and Humanity Science Centre has developed an application, Engineering Vocabulary Game for iOS. The application is developed to guide and teach undergraduates in using the right English language in engineering through digital games.

11. Engineering Vocabulary Game for iOS

IBM CoE, together with lecturers from the Language and Humanity Science Centre has developed an application, Engineering Vocabulary Game for iOS. The application is to improve teaching and learning at the faculty.

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**UMP ENTRUSTED BY JAPANESE COMPANY TO DEVELOP ALGAE PRODUCTION PROJECT IN MALAYSIA**

Universiti Malaysia Pahang (UMP) was tasked by Japanese biofuel research firm IHI NeoG Algae to develop a facility where research projects on algae production could be conducted in Malaysia.

This was because UMP was identified as having the right expertise and physical capability to undertake the project and by working together with Malaysian Biotechnology Corporation Sdn Bhd (Biotech Corp), the project was completed within four months.

The facility was located at ITECS, UMP Pekan campus. Work commenced in the middle of September and completed on Dec 8, 2015.

It is a research and laboratory centre that studies the feasibility of algae cultivation in the peninsula’s east coast region at South China Sea.

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**TECHNICAL CONSULTATIONS WITH GOLDEN FARM A BOON FOR DR. TAN**

Dr. Tan Suat Hian from Faculty of Industrial Science and Technology (FIST) had four series of technical consultations with Golden Farm Development Sdn Bhd. in 2015. The services earned her RM21,840.88 in consultation fees.

Dr. Tan gave technical analysis on the food products provided by the company. She also provided professional advice on how to make improvements on the products.

She is now collaborating with the company in conducting research works on ways to enhance the quality in food production.
UMP’S PARTICIPATION IN SIFF 2015

By: Nor Ilma Mustafa Kamal

Universiti Malaysia Pahang (UMP) submitted three entries to the Seoul Invention and International Fair which was held from November 26-28, 2015.

Listed below are the entries submitted to SIFF 2015:

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT LEADER</th>
<th>MEMBERS</th>
<th>TITLE</th>
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<th>MEDAL</th>
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<tbody>
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<td>1</td>
<td>Assoc. Prof. Dr. Md. Maksudur Rahman Khan</td>
<td>Dr. Chong Kwok Feng, Prof. Dato’ Dr. Rosli bin Mohd Yunus, Md. Rahim Uddin, Ellie Teo Yi Lih, Ong Huei Ruey</td>
<td>Wastewater To Battery Material</td>
<td>FKKSA</td>
<td>GOLD</td>
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<tr>
<td>2</td>
<td>Dr. Nina Suhaiyti binti Azmi</td>
<td>Dr. Jaya Vejayan A/L Palliah, Marina Mohd Sham, Dr. Solachuddin Jauhari Arief Ichwan, Dr. Mariani Abdul Hamid</td>
<td>GLAMequinn: Serum To Strengthen Hair and Prevent Hair Loss.</td>
<td>FSTI</td>
<td>SILVER</td>
</tr>
<tr>
<td>3</td>
<td>Dr. Doh Shu Ing</td>
<td>Dr. Chin Siew Choo, Dr. Andri Kusbiantoro, Tan Kim Guan, Wong Yih Kang</td>
<td>CHAR-ISS- Potential Cement Replacement In Concrete</td>
<td>FKASA</td>
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The winners and their projects are as listed below:

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</tbody>
</table>

NINTH INTERNATIONAL WARSOW INVENTION SHOW 2015, POLAND

By: Abdul Rahman Ahmad

Six undergraduates of Universiti Malaysia Pahang (UMP) won three gold medals, three silver medals and two special awards at the Ninth International Warsaw Invention Show 2015 which was held from October 11 - 14, in Warsaw University, Poland.

About 500 entries were submitted by 20 countries including Poland, Iran, Moldova, Republic of Czech and Taiwan.

The winners and their projects are as listed below:

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<td>Wastewater To Battery Material</td>
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<td>FKASA</td>
<td>BRONZE</td>
</tr>
</tbody>
</table>
Six Universiti Malaysia Pahang (UMP) undergraduates did the university proud when they won three gold medals, three silver medals and one special award at the Kaohsiung International Invention and Design Expo 2015 held from December 4-6, 2015 in Kaohsiung, Taiwan.

Their research projects had already won gold medals in the Malaysia International Engineering Invention and Innovation Exhibition 2015 (i-ENVEX 2015) held in Universiti Malaysia Perlis in April 2015.

The 100% achievement was the second time in the year after their win in International Warsaw Invention Show 2015 held at Warsaw, Poland.

Twenty countries took part such as China, Canada, Korea and Romania and more than 300 entries were submitted.

The winners and their projects are listed as below:

<table>
<thead>
<tr>
<th>NO</th>
<th>NAME</th>
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<th>ACHIEVEMENT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chan Han Jie</td>
<td>Synthesis And Characterisation of EFB Clinker Supported Ni And Co Catalysts For Methane Dry Reforming</td>
<td>Gold</td>
<td>The fusion of methane and carbon dioxide, using a catalyst based on Ni and Co, which is reinforced by oil palm empty fruit bunch clinker through wet impregnation method and 20-80 formula.</td>
</tr>
<tr>
<td>2</td>
<td>Farah Ayuni binti Fauzi</td>
<td>Joint Angle Measurement Device</td>
<td>Gold</td>
<td>This joint angle measurement device can display patient’s joint data movement on an android mobile device via the Bluetooth module. This device can display real-time data of the patient’s joint movement while walking and standing.</td>
</tr>
<tr>
<td>3</td>
<td>Mahadi bin Bahari</td>
<td>Syngas Production From Co2 Reforming of Methane Over Supported Ni Catalyst</td>
<td>Gold</td>
<td>The use of methane, CH4, and carbon dioxide gas, CO2, in producing ratio product hydrogen gas, H2, and carbon monoxide, CO, used as raw material in Fischer-Tropsch process</td>
</tr>
<tr>
<td>4</td>
<td>Sathis A/L Vatumalai</td>
<td>2 Degree of Freedom of Solar Tracking System for Optimum Solar Cell Implementation using DC Boost Converter Controlled by Fuzzy Logic Controller</td>
<td>Silver</td>
<td>Tracking and optimising solar panel power by designing and implementing the fuzzy logic controller using micro controller to control the solar panel output voltage.</td>
</tr>
<tr>
<td>5</td>
<td>Mohamed Ashraf bin Mohamed Noor</td>
<td>Internet Gardening System</td>
<td>Silver</td>
<td>Using the concept of Internet of Things, a system that is able to interact via the internet network is created. This system can gauge a garden’s perimeter such as temperature, air humidity, soil humidity and lighting level.</td>
</tr>
<tr>
<td>6</td>
<td>Suguna A/P Jeganathan</td>
<td>Formulation of Hair Straightening Cream From Keratin Protein</td>
<td>Silver</td>
<td>Keratin extracted from chicken feathers is produced in cream form to straighten hair.</td>
</tr>
</tbody>
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