

IEM-METD Student Design Award 2016

MECHANICAL ENGINEERING TECHNICAL DIVISION



reported by
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More than 100 engineering students in institutions of higher learning had a chance to pitch their innovative ideas on “Construction Mechanisation For Productivity Improvement” as part of a national event organised by IEM’s Mechanical Engineering Technical Division.

The first IEM-METD Student Design Award 2016 was held at the Kuala Lumpur Convention Centre in Kuala Lumpur on 14 April 2016, in conjunction with CIDB-IEM Construction Career Fair 2016. The Organising Chairman was Ir. Dr. Tan Chee Fai, assisted by Ir. Dr. Kannan Munisamy (METD Chairman), Ir. Loo Chee Kin (Advisor), Ir. Dr. Cheong Thiam Fook (Advisor) and Dr. Lim Chin Seong (Committee Member).

The Design Award was the brainchild of Ir. Dr. Tan who wanted to improve the practical abilities and innovative, systematic and common sense approach in engineering students as well as expose them to the “real world” of engineering. The Design Challenge covered the key requirements of a professional engineer and gave students an insight into what would be expected of them when they graduate.

The competition was set in the context of Construction Mechanisation. The productivity in the local construction industry grew by a moderate 5.2% in 2013 to RM23,975, contributing 3.7% to Malaysia’s gross domestic product (GDP).

The construction industry has high forward-linkages with the service sector and even higher backward-linkages to the manufacturing and services industries. It is an important economic driver and builds all the social and economic facilities which enable wealth creation and economic growth. The productivity of the construction sector growth is slow because some on-site construction practices and tasks still require a high degree of labour input.

So for the 1st IEM-METD Student Design Award 2016, engineering students were tasked with designing a product that would contribute to the mechanisation of the construction industry and improve productivity.

The competition was opened to teams of 2-5 engineering students each, from local universities. This competition was one of the initiatives by IEM-METD to support the integrated design approach in institutions of higher learning. It was also aimed at giving students practical experiences which would complement their theoretical knowledge and give them an edge in the job market. It involves four elements:

1. Working as a team to design a device/equipment that can improve productivity in the construction industry.
2. Competing with other teams to design an innovative product.
3. Producing a poster to explain and publicise the team’s work.
4. Making a presentation to explain the rationale for the team’s work.

16 teams from local universities took up the challenge and the preliminary evaluation was held on 5 April, 2016. The judges for this stage were Ir. Loo Chee Kin (IEM METD), Dr. Lim Chin Seong (IEM METD), Ir. Yeoh Jit Shiong (IEM METD), Ir. Dr. Rizauddin bin Ramli (UKM), Assoc. Prof. Dr. Zauddin Sajuri (UKM), Assoc. Prof. Ir. Dr. Mohd. Amin bin Abd. Majid (UTP), and Dr. Muhamad Mat Noor (UMP). Listed below are the 8 teams selected to proceed to the final stage.

Name of Team	Educational Institutions Name
HTPC	Universiti Kebangsaan Malaysia
The 360° Safe Helmet	Universiti Kebangsaan Malaysia
Crème De La Geme	Universiti Teknikal Malaysia Melaka
The Safezone (UKM)	Universiti Kebangsaan Malaysia
The Vibes	University of Nottingham
Magglas	University of Nottingham
Vicissitude	University of Nottingham
Team KDU	KDU University College

At the final stage in Kuala Lumpur Convention Centre on 14 April 2016, the finalists competed in design, oral presentation and poster presentation. Judges for the poster competition were Mr. Alan Lim Chong Beng (KETHA), Ir. Mohd. Azhar Helmi Soo bin Abdullah (KLCC Holdings) and Mr. Khairuniza Hj. Musa (MRT Corp).

Then each team had to pitch the design solution to the panel of judges comprising Mr. Raghid Fasih Azmi (IEM METD), Ir. Syed Neguib bin Syed Mohamed (IEM METD) and Mr. Chiam Tau Sen (Inflectec).



Photo 1: The team Universiti Teknikal Malaysia Melaka in action.



Photo 2: The champions from University of Nottingham with Ir. Gopal Narian Kutty, Vice President IEM 2015/2016 (5th from the left) and Ir. Dr Tan Chee Fai, Ogranising Chairman (4th from the left).



Photo 3: The guests of honour, participants, judges and committee members of 1st IEM-METD Student Design Award 2016.

The winners of the 1st IEM-METD Student Design Award 2016 were:

Category of Winners	Group	University	Name
1st	Vicissitude	University of Nottingham	Ng Zheng Yu
			Lee Hong Yang
			Chong Weng Fai
			Ivan Lim Zhi Tao
2nd	Crème De La Geme	Universiti Teknikal Malaysia Melaka	Tan Chee Nian
			Yong Kai Fan
			Ng Seng Ho
			Chow Jia Le
3rd	The Vibes	University of Nottingham	Nik Mohamad Rafiuddin Nik Rashid
			Nur Shafieza Riwayat
			Arnold Noah Mawaggali
Best Presentation	Vicissitude	University of Nottingham	Ng Zheng Yu
			Lee Hong Yang
			Chong Weng Fai
			Ivan Lim Zhi Tao
Best Poster	Team KDU	KDU University College	Tan Pei Kiat
			Ling Kang Xian
			Daniel Phua Yong Xiang
			Chow Chan Khye

Prizes were given away by Ir. Gopal Narian Kutty (Vice President IEM 2015/2016), Ir. Fam Yew Hin (Advisor IEM METD) and Ir. Wong Chee Fui (IEM Executive Director).

The organising committee of the 1st IEM-METD Student Design Award 2016 would like to acknowledge the

support from the guests of honour, advisors, judges, IEM secretariat staff and participating universities such as Nottingham University, Universiti Kebangsaan Malaysia, Universiti Teknikal Malaysia Melaka, Universiti Teknologi Petronas, KDU University College and Universiti Malaysia Pahang. ■