

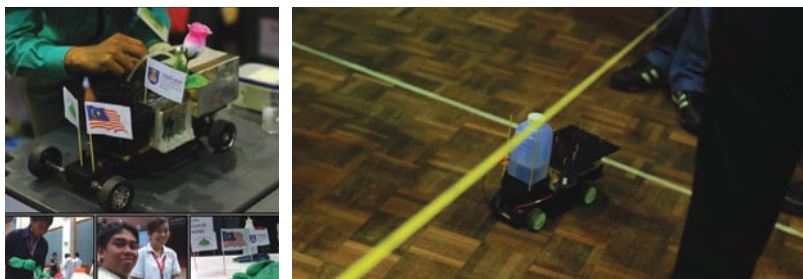
UKM Tops 6th Malaysian Chem-e-Car 2011 Competition

CHEMICAL ENGINEERING TECHNICAL DIVISION

THE 6th Chem-e-Car competition was jointly held by IEM and Universiti Teknologi PETRONAS (UTP) on 17 March 2011 at UTP's campus in Tronoh, Perak. The competition marked another achievement by the Chemical Engineering Technical Division (CETD) of IEM as the participation by 31 teams was at a record high since the competition was introduced in 2005.

With 31 competing teams representing 15 Institutions of Higher Learning (IHL) this year, the Chem-e-Car competition has become the competition for Chemical Engineering undergraduates. Aimed at providing a stage for undergraduates from universities and colleges to showcase their engineering ability, the competition also stresses on the participants' creativity on the performance of a model car powered by self-built chemical cell or fuel cell as its propulsion system. The power required to drive the model car must be generated or converted from chemical energy.

The Chem-e-Car competition focuses on the concept of present engineering education which emphasises on hands-on, creativity, active and continuous concepts. In addition, the competition does not focus on speed, but rather on the ability of the model car to transverse a specified distance whilst carrying a specific load of water (100ml to 500ml).



The load and distance are only revealed about one hour prior to the start of the competition. The model car that comes to a stop nearest to the designated line/distance would be declared the winner. It was therefore a test on accuracy and the participants' ability to calibrate their model cars on the spot, which inculcates flexibility and adaptability in the students.

This year, the rules were further improvised as both the distance and load were different during the first and second attempt, thereby requiring the participants to be quick on their feet to recalculate the formulas and recalibrate the model cars. A two-minute time limit for the model car to complete the distance was also implemented to ensure that the competition was tighter, which meant that the students had to be diligent in their calibration.

Out of the 31 teams, there was one international team from Institut Teknologi Sepuluh Nopember from Indonesia who participated for the first time in the competition. The participation of international teams started since 2010. The Institut Teknologi Sepuluh Nopember team, Spe-K-Tronics, performed very well by placing second in the poster competition. The poster competition was duly won by Blue Synergy from Universiti Malaysia Pahang.

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All teams were intensely competitive and gave their best effort including those who participated for the first time. SEGi University College placed third in their first attempt at the competition. UiTM's Boys Over Flowers put up a great show to win the second spot, the first time they have ever been on the winners' platform. Universiti Kebangsaan Malaysia, via their team Thousand Sunny, worked hard to recapture the title which they last won during the inaugural competition in 2005. The winner received a cash prize of US\$1,000, while the second and third place winners received cash prizes worth US\$750 and US\$500 respectively.

The result of the 2011 car competition is presented in Table 1. Real-time announcement of the results made electronically was also introduced for the first time which added to the intensity of the competition.

Table 1: Competition Results 2011

	Team	Distance	Ranking
1	InnoChem (UTAR)	2.3	15
2	Cartown (TATIUC)	2.19	14
3	TATIUC 2 (TATIUC)	0.75	5
4	A4 (UTAR)	DQ	
5	UTP RON 11 (UTP)	5.73	24
6	Spe-K-Tronics (ITS)	4.21	21
7	Coppuzino (UMS)	1.6	11
8	Zexer (UniKL-MICET)	0.77	7
9	Dynamex (UM)	9.64	27
10	Black Beauty (UKM)	0.77	7
11	Gyrus (UM)	9.56	26
12	Boys Over Flowers (UiTM)	0.38	2
13	Synergy 2011 (USM)	3.25	20
14	International Malaysian Inventor (I-Min) (UMP)	4.24	22
15	4 P.M. (UniKL-MICET)	3	18
16	Taylor's Go Green (Taylor's University)	3.22	19
17	PRIMAX 11 (UTP)	0.76	6
18	TATIUC 1 (TATIUC)	4.57	23
19	Eco-Future Team (UTP)	2.73	16
20	Secret Weapon (USM)	1.21	9
21	Zebra Power (UiTM)	1.85	12
22	Smart-E (UTP)	0.61	4
23	Asper (UniKL-MICET)	1.49	10
24	Kasturi (UPM)	7.64	25
25	X-Ternal (UKM)	2.86	17
26	K.C.H.K. (UTAR)	DQ	
27	Future-Rator (SEGi UC)	0.41	3
28	Thousand Sunny (UKM)	0.11	1
29	V-Factor (UniKL-MICET)	17.74	29
30	Blue Synergy (UMP)	1.88	13
31	Taylor's Chem E Car (Taylor's University)	11.49	28

The poster competition, held after the model car competition, was aimed at encouraging the undergraduates in public speaking and to polish their presentation skills. Participants were given 10 minutes to present their model cars and describe the propulsion system, as well as the innovative and creative ideas they have made in areas such as propulsion system, safety, environmental issues, efficiency, etc.

This year, the poster competition was made more structured with specific percentages allocated to the various criteria:

- Description of the chemical reaction/power source/ stopping mechanism (20%)
- Design creativity and unique features of the vehicle (20%)
- Environmental and safety features (20%)
- Economic aspects (20%)
- Quality of the poster and team member presentations (20%)

Besides the competition itself, UTP also played host to a pre-competition dinner held on 16 March 2011. Engineering students from UTP had put up a superb performance of songs, dance and martial art skills to awe the audience. The performance clearly put an end to the "stereotype" image of engineering students as being dull and boring.

The IEM Immediate Past President, Y.Bhg. Dato' Ir. Prof. Dr Chuah Hean Teik, officiated the opening ceremony accompanied by the Rector and Chief Executive Officer of UTP, Datuk Dr Zainal Abidin bin Haji Kasim. IEM Vice President, Ir. Yim Hon Wa closed the ceremony and presented the prizes together with Dr Hilmi Mukhtar, UTP's Director of Transformation Office.

The Organising Committee would like to thank and congratulate UTP for a great show, its warm hospitality as well as being a very good host. The former also wishes to express its gratitude to the judges, the IEM Secretariat and others for making the event a success.

The CETD is proud to acknowledge that the competition had created tremendous interest in the IHLs, with a number of them stepping forward to indicate their interest to host the next competition. After evaluating the proposals from the various IHLs, the CETD has awarded Universiti Malaysia Sabah as the next host for the upcoming 7th Malaysian Chem-e-Car competition scheduled in April 2012. ■

Solution for 1Sudoku published on page 12 of this issue.

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