

## Overview of Shell Eco-marathon Asia 2014 Off-Track Awards Winners

### **Communications**

PNEC NUST-PROTOTYPE

National University of Sciences and Technology (NUST), Karachi  
Pakistan

PNEC NUST-PROTOTYPE was selected because of their innovative approach to creating awareness and support for their team for Shell Eco-marathon Asia. Besides important traditional media partnerships, they went to various public forums targeting college and school students, families and the community at large. They secured interest from local celebrities who helped attract a much wider audience through their own social media presence. Their communications mix and use of multiple channels and platforms were both effective and innovative in meeting their objectives.

### **Vehicle Design**

NTU DIESEL CAR RACING TEAM

Nanyang Technological University  
Singapore

The team's technical paper presented a complete and comprehensible account of their different research undertakings which should be the mark of a true engineering researcher. During their interviews with the jury, they readily answered all queries and even provided updates on their progress. Lastly, their actual performance on the track was in sync with their desired design – proving that their design worked.

### **Technical Innovation**

NANYANG E DRIVE

Nanyang Technological University  
Singapore

Nanyang E Drive won this award because of their use and placement of an electromagnetic clutch to eliminate most drive-train losses when coasting, and for incorporating a splitter to separate turbulent and laminar flows to reduce drag.

## **Perseverance and Spirit of the Event**

MIT ECO-WARRIORS

Madras Institute of Technology

India

DLSU ECO CAR TEAM - ELECTRIC

De La Salle University

Philippines

All teams displayed perseverance and spirit of the event in different ways. These teams stood out because of their persistence and generosity while maintaining a positive attitude. From having no car to passing technical inspection and obtaining a valid track run, Team MIT Eco-Warriors is exemplary of perseverance. DLSU Eco Car Team - Electric demonstrated great team spirit as they came forward to help.

## **Safety**

NTU DIESEL CAR RACING TEAM

Nanyang Technological University

Singapore

Safety was effectively employed into the core of their design with impressive risk assessment studies and clever use of materials. Special attention was placed on computer design and laser cut strips of wood that were made to absorb energy in case of impact, yet break up into small parts and not large dangerous shards. It was also noted that the team displayed exceptional safety practices in their garage by maintaining a very orderly work environment free from avoidable hazards.

## **Shell Helix Tribology**

TEAM MONASH 2

Monash University, Malaysia

Malaysia

Team Monash 2 recognised the importance of keeping their vehicle components clean and lubricated. They conducted a simple experiment to arrive at the conclusion. They also demonstrated an understanding of the impact of their fuel of choice, GTL Diesel, on lubrication in the vehicle engine. This team recognised the importance of choosing the right viscosity, minimising friction and maximising fuel economy.