

St. Peter's Engineering College

Tire-I Event- SAE INDIA Collegiate Club Report

The event was conducted in the SPEC premises, Mechanical Block. The Event was started in the morning with the introductory speech by the student Representative Ajay.M and Karthick.V. Followed by Paper Presentation Event. Three Papers were presented by the students titled listed below

- Weight Reduction in Automobile
- Liquid Catalyst Injection System
- Alternate Fuels

The Paper Presentation session was observed by honorable HOD Mr. K. Purushothaman (Department of Mechanical Engineering), Asst. Prof. M. Chinna Pandiyan, Sr. Lect. C. Karthikeyan and was judged by final year students, Chandar Prakash and Ganesh Kumar. The Next Event held was Auto Quiz was organized by final year students, R. Kannan and R. Ajay Koushik. 7 teams with 3 students each participated in this event. Quiz was conducted with the sequence of four rounds. They are

- General Round
- Special Round
- Rapid Fire Round
- Visual Round.

The teams with top points were ranked first, second and third and selected for the Tire 2 event.

After the Lunch was Aero Modeling Competition, the most eye Catching event of the day. The basic idea behind this event is to create a “wooden Model of the Glider” with the given kit. The Kit was supplied from SAE, India. 7 teams with 3 students each participated in this event. This Event had two sessions

- Designing
- Testing

After the Designing Phase, Testing was conducted at Main Block. The event was observed by HOD Mr.K. Purushothaman (Department of Mechanical Engineering), Asst. Prof.M. Chinna Pandiyan and was judged by final year students Chandar Prakash Khatri.

List of all the participants and winners are enclosed herewith.

St.Peter`s Engineering College Student Convention 2008 Tier-I Report

Auto Quiz Winners List

Team-A 1st Place

1. Dinesh. B (Final Year Mechanical Engg.)
2. Senthil Kumar. T (Final Year Mechanical Engg.)
3. Visal Vikraman (Final Year Mechanical Engg.)

Team-B 2nd Place

1. Anup. A. Gupta
2. Ajith
3. Ashwin Balakumaran

Team-C 3rd Place

1. Divakaran. M
2. Saravanan
3. Ravi. S

Auto Quiz Participants List

Team-D

1. Giridharan.R.G
2. Sakthi. R
3. Selvakumar. S

Team-E

1. Ajay Sunil. N
2. Arvind. K.S
3. Surrendhar

Team-F

1. Bragatheeshvaran
2. Shabber Ali Khan
3. Jigar B Patel

Team-G

1. Hari Shankar
2. Sathish Kumar. A
3. Shankar.M.M.

St.Peter`s Engineering College

Student Convention 2008 Tier-I Report

Aero Modeling Winners List

Team Fly High-1st Place

1. Ajay. M (Final Year Mechanical Engg.)
2. Akshay Bakshi (Final Year Mechanical Engg.)
3. Karthick. V (Final Year Mechanical Engg.)

Aero Modeling Participants List

Team Buzz

1. Prajit srivastava (Third Year Mechanical Engg.)
2. Prashant Mohan Bhatnagar (Third Year Mechanical Engg.)
3. Hony Vincent (Third Year Mechanical Engg.)

Team Bay Star Scream

1. Balachandar.S.R (Second Year Mechanical Engg.)
2. Anirudh. M (Second Year Electronics & Instrumentation Engg.)
3. Pranav Yadav (Second Year Mechanical Engg.)

Team Vaayu The Creation

1. Caroline Jeba Petricia (Second Year Mechanical Engg.)
2. Monisha Rajan (Second Year Mechanical Engg.)
3. Prashant. L (Second Year Mechanical Engg.)

Team Bleitskreig

1. Calistus Rajesh. J (Third Year Mechanical Engg.)
2. Chandrasekar (Third Year Mechanical Engg.)
3. Balasubramaniyan (Third Year Mechanical Engg.)

Team Mech Airways

1. Raj kumar. G (Third Year Mechanical Engg.)
2. Riyaz. H (Third Year Mechanical Engg.)
3. Kamalakannan. D (Third Year Mechanical Engg.)

Team Test Drive Fighter

1. Kamalesh. V.S (Second Year Mechanical Engg.)
2. Balachandar (Second Year Mechanical Engg.)
3. Infant Raja (Second Year Mechanical Engg.)

First Place goes to **Team-Fly High** Maximum Distance covered by the glider is 80.6 and the time of flight is 3.28seconds

St.Peter`s Engineering College

Student Convention 2008 Tier-I Report

CAD Modeling

Winners List

Team-A-1st Place

1. Sathish .P.B (Final Year Mechanical Engg.)

2. Shankar.M.M. (Final Year Mechanical Engg.)

Radial Engine Design was modeled by the above Team with Pro-E software and the presentation was given.

Other Participants

Team-B

1. Visal Vikraman (Final Year Mechanical Engg.)

2. Senthil Kumar. T (Final Year Mechanical Engg.)

Radial Engine Design was modeled by the above Team with Pro-E software and the presentation was given.

Team-C

1. Ajay. M (Final Year Mechanical Engg.)

2. Karthick. V (Final Year Mechanical Engg.)

Clutch Plate Assembly was carried out by Pro-E software and the presentation was given.

Team-D

1. Muthukumaran. M (Final Year Mechanical Engg.)

2. Sathish Kumar. A (Final Year Mechanical Engg.)

Clutch Plate Assembly was carried out by Pro-E software and the presentation was given.

St.Peter's Engineering College

Student Convention 2008 Tier-I Report

Paper Presentation Winners List

1st Place

Topic- Liquid Catalyst Injection System

Presented By **Akshay Bakshi** (Second Year Mechanical Engg.)

Abstract of Liquid Catalyst Injection System

Abstract:

In this highly industrialized world every thing works on the energy system, without these energy system machines are lifeless . Among these power systems IC engines can be assumed to be most versatile sources, but they have a draw back that is emission. Emission of the green house gasses particularly NOx ,CO and particulate matter including oxides of sulfur also. accoring to a survey conducted in bang lore (2005) the emission of NOx and CO are 320ppm and 300ppm respectively . so there is a great need to suppress these green house gasses . in order to do a catalyst converter is innovatively designed . LCIS is a liquid based catalyst converter which works automatically and precisely. This is microprocessor controlled device which ensure the programmed injection of catalyst in order to suppress NOX . the catalyst system consists of three major units namely storage unit ,control and relay unit, injection and catalyses chamber . this device can be incorporated to exhaust cavity of a engine and exhaust pipe can be connected to the catalyses chamber which is nothing but a cylindrical pipe having concentric helical pores layer of absorbent placed inside incorporated with the catalyst- ---injectors placed in order to distribute the catalyst uniformly. the operation of the device starts when the exhaust gas enters in the cavity then the input leds of analyzer will give its signal to the microprocessor which will give relay to the stepper motor and it drives the rack and pinion arrangement connected to the gate of the storage tank. As the motor rotates the pinion the gate is opened and the catalyst will be injected to the injection cavity so that it is injected to the catalyses cavity . the efficiency of project to be around eighty five percent based on the catalyst efficiency toward gas at particular temperature. This can be used against the cold start emission and can be used for diesel and other engines also. this can be assumed to be the universal catalyst converter .

2nd Place

Topic-Weight Reduction in Automobiles

Presented By **J. Calistus Rajesh** (Third Year Mechanical Engg.)

R.G. Giridharan (Third Year Mechanical Engg.)

Abstract of Weight Reduction in Automobiles

Abstract:

The easiest and the least expensive way to reduce the energy consumption and emissions of a vehicle are to reduce the weight of the vehicle. To achieve lightweight construction, without compensating on rigidity, automakers have been investigating the replacement of steel with aluminium, magnesium, composites, and foams. The recycling and recovery of end-of-life vehicles, which involves recovery targets of 85%, are driving the auto industry to adopt lightweight materials technology to meet these recovery targets.

Weight reduction is also the most cost-effective means to reduce fuel consumption and greenhouse gases from the transportation sector. It has been estimated that for every 10% of weight eliminated from a vehicle's total weight, fuel economy improves by 7%. This also means that for every kilogram of weight reduced in a vehicle, there is about 20 kg of carbon dioxide reduction.

Other Participants for presentation

1. Selvakumar. S (Third Year Mechanical Engg.)
2. Kannan. R (Third Year Mechanical Engg.)

Topic-Presented a paper on Alternate fuels

St.Peter`s Engineering College
Student Convention 2008 Tier-I Report

Student Business Challenge Participants List

1. Ajay Sunil. N (Third Year Mechanical Engg.)
2. Arvind. K.S (Third Year Mechanical Engg.)
3. Kannan. R (Final Year Mechanical Engg.)