

# **Annual Report**

**Team ETA**  
**(2018-2019)**

**K. J. Somaiya College of Engineering, Mumbai- 400 077**

(Autonomous College Affiliated to University of Mumbai)

**Name of the organization/chapter/project: Team ETA**

**List of Members/Details of Committee- 2018-2019**

<b>Sr. No.</b>	<b>Name of the Faculty advisor/ in-charge</b>	<b>Department</b>	<b>Portfolio</b>
1	Dr. A. K Gangrade	Mechanical	Advisor

<b>Sr. No.</b>	<b>Name of Student</b>	<b>Department</b>	<b>Portfolio</b>
1	Paresh Vora	Mechanical	Team Manager
2	Abdulqadir Vhora	Mechanical	Technical Coordinator
3	Tanishq Parikh	Mechanical	Administrator
4	Jay Nakrani	Mechanical	Marketing Head
5	Ashok Mourya	Mechanical	Bodyworks Head
6	Paul	Electronics	Member
7	Kushal Deokar	Mechanical	Member
8	Cherag Mevawala	Mechanical	Member
9	Dhairya Kothari	Mechanical	Member
10	Rahil Doshi	Mechanical	Member
11	Parth Dama	Electronics	Member

**Photo of members/committee – 2018-2019**



**K. J. Somaiya College of Engineering, Mumbai- 400 077**  
(Autonomous College Affiliated to University of Mumbai)

**Details of events/activities held during academic year 2018-2019**

<b>Sr. No. of Event / Activity</b>	<b>Day/Date</b>	<b>Year</b>	<b>Month</b>	<b>Time</b>	<b>Venue</b>	<b>Description of Activity</b>
<b>1.</b>	29 <sup>th</sup> August to 1 <sup>st</sup> September	2018	Aug/Sept	--	BEC, Mumbai	<b>Automation Expo</b>
<b>2.</b>	6 <sup>th</sup> to 9 <sup>th</sup> December	2018	December	--	Chennai	<b>Competition- Shell Eco-marathon India, Challenger Event</b>
<b>3.</b>	10 <sup>th</sup> to 12 <sup>th</sup> January	2019	January	--	BEC, Mumbai	<b>International Conference and Exhibition on Reinforced Plastics (ICERP 2019)</b>

**Reports of event/activity**

<b>Sr. No. of Event / Activity</b>	<b>Day/Date</b>	<b>Year</b>	<b>Month</b>	<b>Time</b>	<b>Venue</b>	<b>Description of Activity</b>
<b>1.</b>	29 <sup>th</sup> August to 1 <sup>st</sup> September	2018	Aug/Sept	--	BEC, Mumbai	<b>Automation Expo</b>

**Report of event/activity**

**Event– Automation Expo**

**Overview**

Team Eta had participated and exhibited their gasoline prototype vehicle at the Automation Expo. We were generously invited by our sponsor company Marvel Engineering who provided us a chance to present and exhibit our prototype vehicle at the event. The exhibition was held between 29/8/18 to 1/9/18 at Bombay Exhibition Centre (BEC). The purpose of visiting the exhibition was to maintain and create new contacts for availing sponsorships in the future as well as to showcase the existing prototype, its sponsors and representing the college and the team at an International level.

**Sample Photographs of the Event/Activity**



**Reports of event/activity**

<b>Sr. No. of Event / Activity</b>	<b>Day/Date</b>	<b>Year</b>	<b>Month</b>	<b>Time</b>	<b>Venue</b>	<b>Description of Activity</b>
2.	6 <sup>th</sup> to 9 <sup>th</sup> December	2018	December	--	Chennai	<b>Competition- Shell Eco-marathon India, Challenger Event</b>

**Details of participation in the event/activity**  
(Fill wherever is applicable or information is available. At least total need to fill)

<b>No of students / faculty</b>	<b>COMP</b>	<b>ETRX</b>	<b>EXTC</b>	<b>IT</b>	<b>MECH</b>	<b>Total no of participants</b>
<b>FY</b>	-	-	-	-	-	<b>9</b>
<b>SY</b>	-	-	-	-	-	
<b>TY</b>	-	-	<b>1</b>	-	<b>6</b>	
<b>LY</b>	-	-	-	-	<b>2</b>	
<b>No of Faculty</b>	-	-	-	-	-	<b>0</b>

**Report of event/activity**

**Competition: Shell Eco-marathon India, Challenger Event**

**Overview**

For the first time in 86 years the Shell Eco-marathon was held in India since the competition was originated. Known as the Challenger Event it was meant to be a competition in which the team would test drive their vehicles and compete with 20 other teams in order to achieve maximum efficiency. Team Eta was hoping to get the best out of this competition and the vehicle was just ready with all the systems before the competition.

**Preparations**

We had all of our electronics remaining to be sorted out and were forced to complete it at the event itself. A whole lot of issues regarding the electric starter mechanism, the EFI sensors were present months before the competition and caused a great delay in the testing and the team could not put the desired amount of time in testing the vehicle.

**Competition**

*Day 1* of the competition was mainly to unload the car from the respective trucks and the paddocks were set up. The car was not under a ready to run condition as some of the systems were dismantled for transportation and the electronic circuit was needed to be perfectly connected with the wires and switches before heading to the safety and technical inspections. We also faced a problem with our vehicle window which was found to be broken on arrival at the Madras Motor Race Track. We had to remake the windows and attach them properly before we could enter the technical and safety inspections. The first day passed on without any success with the electronic system and we could not enter the inspections on day 1.

*Day 2* of the competition began with the rectification of problems and the assembly of a whole new PCB circuit which was built by the team overnight. Some of the teams had successfully completed the TI and SI and were headed to the track for a run by then. We faced a shorting problem in the new circuit on the same day later which was caused by an unnoticed burned fuse. We somehow managed to route the wires and again set up the circuit and were now heading to the technical inspections. The first inspections of vehicle dimensions and weight were successfully completed but faced issues during the brake test on incline in which the rear brake was not able to satisfactorily hold the vehicle instantly. We also faced a wrong rotor disc direction problem which was solved quickly. The other inspections regarding the ergonomics of the driver seat, bulkhead and seat harness were not passed due to improper mounting points. Then finally the driver exit test, visibility test, and engine starting, fuel line, guardings, etc. were completed successfully.

*Day 3* began with the assembly of the chassis that the team had built at the event in order to pass the bulkhead safety test. After that we faced many problems regarding the electronic circuitry and ultimately failed to get a valid technical and safety inspection sticker which made us out of the competition. The Inspections were closed by noon of day 3 and we started packing everything heading to Mumbai with hope of winning the competition next time.

### **Conclusion**

The competition was a great learning experience due to the fact that we actually got to know for the first time how the inspections are carried out and what mistakes should be avoided. It made us realize that we did not prepare for the worst as we could not compete with the other teams on the track. It allowed the team members to interact with members of the other teams by which we got several design suggestions.

### **Sample Photographs of the Event/Activity**



<b>Sr. No. of Event / Activity</b>	<b>Day/Date</b>	<b>Year</b>	<b>Month</b>	<b>Time</b>	<b>Venue</b>	<b>Description of Activity</b>
3.	10 <sup>th</sup> to 12 <sup>th</sup> January	2019	January	--	BEC, Mumbai	<b>International Conference and Exhibition on Reinforced Plastics (ICERP 2019)</b>

### Report of event/activity

#### Event– ICERP 2019

#### Overview

This year Team Eta had participated and exhibited their gasoline prototype vehicle at the International Conference and Exhibition on Reinforced Plastics (ICERP 2019) which is an event organized by FRP Institute once every two years. The exhibition was held between 10/1/19 to 12/1/19 at Bombay Exhibition Centre (BEC). The purpose of visiting the exhibition was to maintain and create new contacts for availing sponsorships in the future as well as to showcase the existing prototype, its sponsors and representing the college and the team at an International level.

### Sample Photographs of the Event/Activity

