

REPORT ON FISITA – 2018

A group of 9 students and 1 faculty attended the **FISITA-World Automotive Congress** held at Chennai World Trade Centre from 03/10/18 to 05/10/18. FISITA is an international forum for engineers, experts and engineering students to share their knowledge on the current trends and cutting-edge technologies in the automotive world. FISITA 2018 gave us a lot of enriching experience.

DAY – 1

We started the day 1 with the inauguration of the Congress. The theme of the Congress was on “**Disruptive technologies for affordable and sustainable mobility**” to make automobiles sustainable, safe and also affordable as they are the need of the hour. The need to be ready for technological disruptions in the fields of shared, autonomous, electric and connected mobility was stressed upon.

The opening ceremony was followed by the first plenary session which was about the electric and connected mobility. Prof. Helmut List spoke about the transition of industry from hardware centric to simulation centric. He spoke about the challenges that industries faced to achieve complete electric mobility like battery cost and charging time. He compared the BEVs (Battery Electric Vehicles) and the FCVs (Fuel Cell Vehicles). Though the price of the individual cell is increasing, the cost of battery is on the rise. The need to reduce the charging time and increase the energy density of the batteries was presented.

Prof. Klaus Kompass spoke about the connected mobility. The points he discussed were on safety aspects in automated driving and incorporation of human aspects like anticipation, experience and informal communication in the vehicle system for improved driver safety. He also spoke about the 5 levels of automation ranging from 0 (complete manual) to 4 (complete automated), the 12 guidelines for automated vehicles and about ADAS (Advanced Driver Assistance System).

The technical sessions followed the plenary session. We attended the session for innovative design. Mr. Subbu Subramanian, Accenture, India gave the Key Note speech. His insight about innovative design and incorporating connectivity in design using IoT and cloud computing was interesting. The concept for future automobiles by FURECIA was enthralling, as it was like an extended living space. The system gauges the passenger reactions and sets the ambience thus creating a seamless transition from different environments. This was followed by 5 paper presentations and all were interesting, though quite advanced. It gave us an insight about how even small changes in design may lead to a drastic change in the performance and efficiency and different methodologies used in design, analysis and optimisation. The Day 1 ended with a leader’s forum on IC Engines & Disruptive technologies and it was concluded that IC Engines would survive for another decade or two.

DAY 2

The second day started with technical sessions in which we attended the “Design aspects of EV/HEV”. The key note address was very interesting which was about the shift of vehicles from IC Engines to EVs. The advantages of EVs on the basis of efficiency and pollution control was discussed. This was followed by 4 paper presentations. The papers were all about the design aspects of EVs, design optimisation tools and methodologies, hybrid vehicles, analysis algorithms, etc... Post tea, there was another set of technical sessions and ADAS got us interested. The key note speech was on the evolution of the driver assistance system and the need to make driving safe and affordable by increasing utility. The speaker Mr.Sanjeet Srivastava, Accenture, India, spoke about the usage of sensors, AI, IoT and cloud computing to make driving safe. The 4 papers that followed were also equally interesting. ADAS for Indian traffic scenario is rather a challenging task and the ideas and technologies that were put forth was enriching. Post lunch was the second plenary session on Autonomous Mobility. Various aspects of autonomous mobility like security, privacy, technologies used were discussed. They spoke about the types of cruise controls, the sensors used, especially LiDAR sensors and its advantages. This was followed by another set of technical sessions. The discussions in second plenary session led us to attend the session about LiDAR technology. The day closed with another plenary session on electric and connected mobility.

DAY 3

After the morning technical sessions, we spent the day visiting stalls from various companies like TVS, General Motors, Bosch, and overseas companies. The technologies and concept vehicles we witnessed were mind blowing and created lot of curiosity. There was also a plenary session about shared mobility and its need. The market for the upcoming technologies was discussed.

The three days of experience in FISITA was really useful. Though more advanced for our level of understanding, it helped us to realise the importance of the subjects we study, the need to have inter disciplinary knowledge and how small things make a big difference. On the whole, the 3 days was very enriching. A few pictures at the conference are attached below.





Details of the participants:

S.No	Name	Roll No	Year of study	Department
1	Murali Manohar B	16BAU091	Pre-final	Automobile Engineering
2	Dhanussh E M	16BAU053	Pre-final	Automobile Engineering
3	Shree Vignesh V S	16BAU009	Pre-final	Automobile Engineering
4	Ragesh N	16BAU025	Pre-final	Automobile Engineering
5	Rohitramanadhan J	16BME008	Pre-final	Mechanical Engineering
6	Rajanandhini S	16BME011	Pre-final	Mechanical Engineering
7	Dinesh Kumar S	16BME068	Pre-final	Mechanical Engineering
8	Balaram S B	15BAU041	Final	Automobile Engineering
9	Rajkumar K	15BAU059	Final	Automobile Engineering
SAE Faculty Advisor				
10	Dr.Karthick Jayaram	Associate Professor, Department of Automobile Engineering, MCET		