



7 DAY INTERNATIONAL WEBINAR ON RECENT TRENDS IN AUTOMOTIVE TECHNOLOGIES

Organized by

Cranfield University, U.K.

SUNY, Binghamton University, U.S.A.

Vellore Institute of Technology, INDIA.

Sponsored by Royal Academy of Engineering, U.K.

28th October 2020 to 4th November 2020

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Track Coordinators	Dr. Thangaraja J IC Engines and Alternate Fuels Dr. Raja Annamalai Materials Dr. Suresh Chavhan Electrical Vehicles Dr. Rammohan A Autonomous Vehicles

About the Webinar

The Indian automotive sector is consistently growing over the past few years and India has become one of the largest automobile markets in the world. Recent advancements in the technologies like artificial intelligence, machine learning, computer vision, deep learning, human computer interaction, sensor fusion, navigation, etc. are accelerating the autonomous vehicles developments. Automobiles continue to deploy sophisticated sensors, controls, and software to become more autonomous and inherently safer for occupants and vulnerable road users. On the other hand, the development of IC engines was driven by stringent regulatory norms of the country. Regulatory bodies expect automotive manufacturers to design fuel efficient vehicles that pollute less without compromising the vehicle cost and performance. Need for higher fuel efficiency and reduced emission has driven the auto industry to focus on weight reduction using novel plastic and composite materials. The material industries, plastic and polymer composite industry are operating to respond to the changing automotive industry needs.

During this pandemic situation it is worth every effort to build an improved awareness and understanding of what is really happening in the automotive landscape through digital medium. Online webinars delivered by experts from the automotive domain helps us to understand and learn more about the changing technologies.

Automotive Research Center of Vellore Institute of Technology, India is organizing a 7 days Webinar on “**Recent Trends in Automotive Technologies**” along with SUNY, Binghamton, USA and Cranfield University, UK from 28th October 2020 to 4th November 2020. The webinar provides an opportunity for people working in automotive R&D, faculty, research scholars, students who are connected in the domain of automotive engineering. The webinar aims to cover the topics in the following four main tracks.

- IC Engines and Alternate Fuels
- Materials
- Electric Vehicles
- Autonomous Vehicles

About VIT

Founded in 1984, as Vellore Engineering College, the institute was accorded a deemed university status in recognition of its academic excellence by Ministry of Human Resource Development, Government of India in June 2001. Vellore Institute of India has made a mark in the field of higher education in India by imparting quality education in a cross cultural ambience combined with extensive application oriented research. VIT is ranked No.1 Private Engineering Institution by MHRD, Govt. of India (NIRF-2016 ranking). The campus has a cosmopolitan atmosphere with students from all corners of the globe. The global standards set at VIT spur us on in our relentless pursuit of excellence in the field of education and research. The campus spread with greenery and sylvan surroundings away from the crowded city. In India, VIT produces top class engineering graduates and has achieved high ranking and reputation. VIT is the first and only University in India to get 4-STAR rating from QS, the international ranking agency. Recently VIT was incurred with Institute of Eminence (IoE) status by the central government of India.

About SMEC

The School of Mechanical Engineering is amongst the premier schools of VIT started functioning right from 1984. The school has got a team of highly qualified faculty members, many holding PhDs from the elite institutes across the globe, to teach and train the best minds of this country. The pride of the school lies in the significant research funding received from several Government agencies such as DST, DRDO, MNRE, CSIR, CVRDE, CPDO, IE, AR&DB, CVRDE, BRNS, ISRO, UGC, NRB, AICTE etc., Memoranda of Understanding (MoUs) with various Industry Research Organizations and leading Universities. The School has modern facilities, enabling cutting edge research in a wide spectrum of technological areas. The school actively assists local industries in product design, complex-part manufacturing and Computational Fluid Dynamics. The courses offered cater to the needs of Aerospace, Defense, Manufacturing, Energy and Automotive industries. This has enabled the students to pursue higher studies in leading Universities in India and abroad.

About ARC

Automotive Research Center (ARC) is an offshoot of School of Mechanical Engineering. It was established during 2005 with funding from DST under FIST scheme. Till 2016 the center was supported by School of Mechanical Engineering. To strengthen the infrastructure and research that relate to the future direction of the global automotive industry, the center was separated from the school. The center is established with world class laboratory facilities. The center's primary focus includes Autonomous Vehicles, Electric Vehicles and research related to Internal Combustion Engine. Autonomous Vehicles related research focuses on L5 autonomous ground vehicles that are capable of driving vehicles like human drivers using intelligent algorithms, lidars, radars and computer vision hosted in high end computers. These autonomous vehicles provide safe and comfortable travelling experience to the end users. Electric Vehicle related research focuses on the development of smart charging stations, communication framework for gridable electric vehicles, intelligent and transportation system. Research related to internal combustion is aligned towards alternate fuels for both SI and CI engines. The centre provides the state-of-art facilities to conduct research activities with biofuels. A dedicated engine testing and fuel testing laboratory enables the entire characterization of biofuels from pre-treatment, production, composition and property testing to evaluation of the biofuel's performance in engine.

Govt. of India recognizes
VIT as an
Institution of Eminence (IoE)

MHRD, Govt. of India has chosen top 10 public institutions
and top 10 private institutions as IoEs to become the world's best.
VIT thanks Govt. of India for its faith in us.



Speakers

Experts from reputed academic institutions, industries are delivering the talks in various topics under the tracks IC Engines and Alternate Fuels, Materials, Electric Vehicles, Autonomous Vehicles.

Topics Covered in the Webinar

- Electric Vehicles
- Charging and Smart Grid
- Connected Vehicles
- Cyber Security
- Battery Management Systems
- Fuel Cell Technologies
- Crash Avoidance
- Building Blocks of Autonomous Vehicles
- Vision Sensors for Autonomous Vehicles
- In-vehicle Car Computers
- Navigation & Motion Planning of Autonomous Vehicles
- Cooperative Driving
- Automotive Aerodynamic Design
- Engine Combustion Modeling and Simulation
- Alternate fuels and emission
- Automotive Exterior & Interior Lighting
- Noise, Vibration, & Harshness in Vehicles
- Hybrid & Electric Powertrain & Electronics



Registration Details

→ The webinar will be online. The webinar link will be communicated to the candidates through email.

→ Registration is free for all participants.

→ Registration Link

<https://forms.gle/Vp7jJ6mcAGgJoTXf6>

→ E-certificates will be issued to all the registered participants, who attend all sessions.

→ The number of participants is limited to 200, which will be based on first come first serve.

→ Last Date for Registration: 26th OCT 2020

→ For queries, contact

Dr. P. Shunmuga Perumal

Mobile: 9790914537

shunmugaperumal.p@vit.ac.in

