

**CALL FOR PAPERS**

# **27<sup>th</sup> National Conference on Internal Combustion Engines and Combustion**

**December 11-13, 2021**



**NCICEC  
2021**



*Organized by*

**VELLORE INSTITUTE OF TECHNOLOGY  
VELLORE**

*Under the aegis of*



**THE COMBUSTION INSTITUTE - INDIAN SECTION (CIIS)  
(Affiliated to The Combustion Institute Pittsburgh USA)**

<https://vit.ac.in/ncicec/>

## NCICEC | 2021

The Combustion Institute - Indian Section (CIIS) is delighted to announce and invite you to participate in the 27<sup>th</sup> National Conference on Internal Combustion Engines and Combustion (NCICEC 2021) organised by the Automotive Research Centre along with School of Mechanical Engineering, Vellore Institute of Technology, Vellore and SUNY Binghamton University, USA from 11 to 13 December, 2021. The goal of NCICEC 2021 is to provide a forum for scholars from academia, industry and research institutions to present advances and current challenges in combustion science. It will offer an environment conducive to exchanging ideas and information in the community involved in research and development works in the field of IC Engines, combustion and propulsion.

Some of the highlights of NCICEC 2021 are as:

- Plenary talks on conference theme
- Original research paper presentations
- Award ceremony including best paper & poster presentation award
- Invited and keynote addresses
- Poster presentations
- Technical exhibitions

## VELLORE INSTITUTE OF TECHNOLOGY



Vellore Institute of Technology (VIT) was founded in 1984 as Vellore Engineering College by Honourable Chancellor Dr. G. Viswanathan. VIT attracts students from all the states and union territories of India with more than 55 countries due to its academic excellence. The curriculum enables students to think innovatively through applied learning practices. Innovations like Fully Flexible Credit System [FFCS], Project-based Learning [PBL], entirely digitized academic portals, and Hackathons assist students in equipping themselves for job skills and kindle their interest and curiosity, thereby moulding them to be better problem solvers. VIT has strong tie-ups with Industries as well as Universities of national and international repute. These MoUs provide students with more significant opportunities to pursue higher education in their fields of interest. VIT also encourages new ideas, patents, and continuously supports entrepreneurial activities. VITAA [VIT Alumni Association] has more than 85,000 alumni across the globe in all industries and strives as a backbone supporting teaching-learning, collaborative research, and placements. The national and international clubs, chapters at VIT provide arenas to the students to think out of the box and excel in co-curricular and extra-curricular activities.

## Automotive Research Centre

Automotive Research Centre (ARC) focuses its cutting edge research that relates to the future direction of the global automotive industry. It is a unique centre which carries out research on Electric Vehicle, Autonomous Vehicle, battery management system and fuel cells. ARC also focuses on alternate fuels for IC engines and emission reduction leading to the development of innovative technologies. ARC also established a Centre of Excellence for Autonomous Vehicles Research in collaboration with SUNY Binghamton University, USA and NVIDIA to develop and test products in the field of self-driving vehicles. The Centre has actively assisted automotive industries in niche areas and received grants from various agencies like DST, SERB, DRDO etc.

## School of Mechanical Engineering

The school of Mechanical Engineering is one of the oldest and the most prestigious schools of VIT. This school started functioning right from 1984, the year in which our institution began. 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 the several Government agencies such as DST, DRDO, MNRE, CSIT, CVRDE, CPDO, IE, AR&DB, BRNS, ISRO, UGC, NRB and AICTE. The department of Science and Technology, Govt of India has recognized the school for its research activities and supported in 2003 and 2010 under FIST scheme. The school has modern facilities, enabling cutting edge research in a wide spectrum of technological areas.

## The CIIS

The Combustion Institute - Indian Section (CIIS) is affiliated to its parent international body at Pittsburgh, USA. The Combustion Institute - Indian Section (CIIS) is a professional registered body. It commenced activities way back in 1974 through a National Symposium in Combustion at the Indian Institute of Technology Delhi. The same has been continued in the form of a biennial National Conference wherein the engineers and the scientists engaged in the research work in the domain of IC Engines and Combustion are provided a network platform for sharing their research contributions. 27<sup>th</sup> NCICEC will be held at Vellore Institute of Technology from 11 to 13 December 2021. The Combustion Institute - Indian Section oversees the technical and organizational aspects of this and other technical events in the country.

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## Vellore - The Fort City



Vellore city is the headquarters of the Vellore district in Tamil Nadu. The city is also known as the fort city and lies on the banks of the Palar river. The Vellore fort was constructed in the 16<sup>th</sup> century by Chinna Bommi Nayak and Thimma Reddy Nayak of Vijayanagar empire. Vellore had been under the rule of the Pallavas, Cholas, Pandyas, Hoysalas, Sambhurvarayars, Chalukyas, Nayaks, Marathas, Mughals, Bijapur Sultans, French and British at one point of time or the other.

The city is also famous for the Vellore mutiny in 1806 against the British rule. Vellore city is situated strategically between Chennai (140 Km) and Bangalore (220 Km) and the temple cities of Tiruvannamalai and Tirupati. The city is also closer to other famous tourist destinations like Pondicherry, Kancheepuram and Mahabalipuram.

## Places to Visit

The Vellore Fort which is said to have been built during Channa Bommi Nayaka and Thimma Reddy Nayaka in the 15<sup>th</sup> century and happens to be one of the best examples of military architecture in South India. These two who built Vellore fort were chieftains under Sadashiva Raya who was the ruler of Vijayanagara at that time. It is one of the most massive forts built during its time and is considered as one of the unique forts in India. It is spread over an area of more than 500 meters, situated at an altitude of 220m. Located right in the centre of the city, it has a giant moat at its entrance.



**Vellore Fort**



### Jalagandeeswarar Temple

Located inside the Vellore Fort, this ancient temple is dedicated to Lord Shiva. Being one of the attractions of the Vellore Fort, Jalakandeswara temple stands out as a mark of excellence of Vijayanagara Architecture. The temple tower has intricate carvings on it, and some richly styled stone pillars support the temple structure.

### Sripuram Golden Temple

The Sripuram Golden Temple is a sight to behold, and it is situated in Tirumalaikodi at Southern Vellore, Tamil Nadu. The golden temple sits inside a spiritual park or 'Spiritual Oasis', and a star path leads the visitors towards it. The main feature of the temple has to be that it is covered in real gold foil and it is regarded as the biggest and the only temple to do that. The inauguration took place on 24<sup>th</sup> August 2007, and it was inaugurated by Narayani Amma.



### Archaeological Survey of India Museum

Archeological Survey of India Museum is neighbouring to the Fort of Vellore. This museum exhibits various kinds of ancient stones, as old as 1000 years, Statues, stone carvings, coins and exhibits that enlighten us about the history. Few of the sculptures are said to exist from the 8<sup>th</sup> century. The museum takes a minimum of 2 hours to stroll around and experience the rich history.

## Call for Papers

Faculty members/ research scholars/ scientists from India and abroad are invited to submit original research in the topics mentioned below. The research papers should offer novel perspectives within the general scope of the conference. The length of a paper should not exceed 08 pages. All submitted papers will be subjected to a "Plagiarism check" by Turnitin software. Only those papers that achieve less than 15% similarity scores with other material published elsewhere will be sent for formal review. . To submit the manuscript, the authors are requested to use the easy chair link. Guidelines for the preparation of the full-length paper and online submission will be soon provided on the conference website.

## Conference Themes

- Aerospace Combustion
- Bio-fuels Production and Utilization
- Combustion Chemistry and Reaction Kinetics
- Methanol production and Utilization
- Combustion Dynamics & Instability
- Alternate Fuels for IC Engines
- Detonation and Explosion
- Hydrogen Fuelled IC Engines
- Heterogeneous Combustion
- IC Engines Simulation and Combustion
- Combustion Diagnostics
- Optical Diagnostics for IC Engines
- High Performance Computing of Combustion
- Engine Controls and Instrumentation
- Gas Turbine and Rocket Engine Combustion
- Low Temperature Combustion (HCCI/PCCI/RCCI)
- Air-Breathing Engines
- Nano Additive for Combustion Enhancement
- Spray Combustion
- Emissions Control Techniques for IC Engines
- Droplet Evaporation and Burning
- Catalytic Converters for IC Engines
- High Ash Content Coal Gasification
- Hybrid Electric Vehicle
- Carbon Sequestration/Carbon Capture and Utilization
- Energy Storage and Utilization
- Biomass High Ash Coal Gasification
- Fire Research

**Any peripheral area having its application in IC Engines and Combustion**

<https://vit.ac.in/ncicec/>

## Key Dates

Abstract Submission last date	March 31, 2021
Full length paper Submission commences	April 01, 2021
Deadline for submission of full length paper	June 30, 2021
Notification of acceptance of full length paper	August 31, 2021
Registration commences	August 31, 2021
Submission of camera-ready papers commences	September 01, 2021
Deadline for submission of camera-ready papers	September 30, 2021
Registration closes	November 30, 2021
Conference date	December 11 -13, 2021

## Paper Publication

All peer reviewed and accepted papers of NCICEC 2021 will be sent for SCOPUS indexed publications. Review papers will be considered for oral presentations only.

Kindly visit the conference website (<https://vit.ac.in/ncicec/>) for the latest updates and information regarding publication partners.

## Registration Information

Type	Amount
Delegates from Academia/R&D Organization/Member CIIS	Rs. 5000
Delegates from Industry	Rs. 8000
Full time students/research scholars	Rs. 2000
Accompanying Person	Rs. 2000

- Additional papers by the same author will be charged @ 50% of the applicable registration fee per paper for inclusion in the conference.
- Registration fee for participants includes: Attendance to all the conference sessions, keynotes, conference satchel and materials, certification, souvenir and proceedings, refreshments/meals during the conference.
- Students should apply valid proof of full-time student status from the University / Institute to claim student rates.

## Sponsorship Opportunities

The conference organizers are seeking sponsors and industrial support. We offer the best stage for the event in terms of additional activities. Sponsorship of NCICEC 2021 provides a sponsor or an organization with a unique opportunity to increase its visibility and product awareness within a highly specialized and influential community. The organizers present a wide spectrum of sponsorship.

### Platinum Sponsor (Rs. 3.0 Lakhs)

- Five complementary registrations with all benefits
- Full page color advertisement on the back cover page of the Souvenir
- Sponsor's logo on the cover page of Souvenir, Brochure, Backdrop, Banners and the Letter head of the conference
- Sponsor's logo/name/ link display on the home page of the conference website
- Two exhibit spaces for the display of the products

### Diamond Sponsor (Rs. 2.0 Lakhs)

- Three complementary registrations with all benefits
- Full page color advertisement inside the Souvenir
- Sponsor's logo/name print on the back cover page of Souvenir, Brochure, Backdrop, Banners and the Letter head of the conference
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- One exhibit space for the display of the products

### Gold Sponsor (Rs. 1.0 Lakhs)

- Two complementary registrations with all benefits
- Half page color advertisement in the Souvenir
- Sponsor's logo/name print on the back cover page of Souvenir, Brochure, Backdrop, Banners and the Letter head of the conference
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### Silver Sponsor (Rs. 50000)

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- Half page color advertisement in the Souvenir
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## Souvenir Advertisement

A Souvenir comprising of messages, keynotes, plenary talks and advertisements of the sponsored industry / organizations etc. will be published and widely circulated amongst the stakeholders such as policy makers, industries, educators and researchers for the dissipation of latest technical know-how in the areas of IC engines and combustion. The organizers of NCICEC 2021 provide a unique opportunity to the organizations/ industries to advertise their products at national level, and that too within a highly specialized and influential community.

## Tariffs

**Full page color advertisement - Rs. 50,000/- | Half page color advertisement - Rs. 30,000/-**



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