

## OBJECTIVE

Hypersonics is one of the challenging areas of R&D in aerospace engineering for the present and next generation. There are several development efforts in realizing hypersonic cruise vehicles, aircraft and rockets. Emerging and yet unresolved issues in hypersonic technologies are of deep interest to both scientists and engineers. Re-entry vehicles (RV), Reusable Launch Vehicles (RLV) and cruise missiles are generally accepted to be in hypersonic flow domain. This is one of the thrust areas of research of great importance to India. A host of technological challenges like aerodynamics, propulsion, communication and navigation, thermal protection, to name a few, need to be addressed.

Thus the objective is to exchange information in order to help raise the awareness of participants to the potential current trends, the new challenges and the new risks posed by Hypersonics in the field of missile technologies. In addition, the main objective of this seminar is to bring together scientists, researchers and industry experts from various domains to identify various challenges and opportunities that exist in developing and employing hypersonic systems of national interest. The delegates will be exposed to the current activities in India to facilitate them to more effectively and efficiently pursue opportunities to harness the power of hypersonic technology and contribute to the national programs.

### The primary objectives of the course are as follows:

- ✓ Exposing the participants to the concept of Hypersonic vehicles in missile applications and its current trends.
- ✓ Imparting the knowledge on the advances and various issues in Hypersonic vehicles applications.
- ✓ Providing a road map for academicians and industry experts to work on challenging problems in Hypersonics.
- ✓ Discussing the research opportunities in these fields.

### COURSE CONTENTS:

- ✓ Overview of Hypersonic technologies
- ✓ Design considerations of Hypersonic Vehicles
- ✓ Hypersonic Aerodynamics
- ✓ Hypersonic flight Stability analysis
- ✓ Hypersonic Testing and Experimental techniques
- ✓ Material technologies for Hypersonics
- ✓ Current trends and Challenges in launching Hypersonic Vehicles

## TARGET AUDIENCE:

Faculty members and Research Scholars from academic institutes, Personnel from R&D organization and related Industries.

## FACULTY:

Sessions will be handled by experienced faculty members from reputed institutions and Experts from R & D organization and related Industries.

## BOARDING AND LODGING:

Accommodation and boarding will be provided in the college campus to all the participants on chargeable basis.

## REGISTRATION DETAILS:

**Registration is free** and it is limited to 30 participants. Applications will be selected on first-come-first serve basis.

## HOW TO APPLY

The applicants should fill the below Google form link and upload their scanned copy of application in the specified format with their Principal / Sponsor signature with seal. (Note: Without Principal / Sponsor signature and uploading mismatched file is not allowed to attend the seminar).

### Google form link:

<https://forms.gle/VbeumYHGET7jHpAeA>

## SCHEDULED DATES

Last date for fill the Google form :25.02.2021  
Intimation of Selection : 27.02.2021  
Confirmation by participants : 28.02.2021

## KONGU ENGINEERING COLLEGE (AUTONOMOUS) PERUNDURAI, ERODE 638 060 TAMILNADU

### DRDO Sponsored One day National Level Seminar on “Current Trends and Advances in Hypersonic Vehicles and its Challenges” (05.03.2021)

### APPLICATION FORM

Name :  
Designation :  
Organization :  
Gender :  
Age :  
Educational Qualification:  
Address for :  
Communication  
  
Mobile Number :  
E-mail ID :  
Experience :  
Teaching : \_\_\_\_\_years  
Others (Specify) : \_\_\_\_\_years  
Need Accommodation : YES / NO  
Signature :

## DECLARATION

The above information is true to the best of my knowledge. I agree to abide by the rules and regulations governing the course. If selected, I shall attend the programme for the entire duration. I also undertake the responsibility to inform the Chairman in case I am unable to attend the course.

Place:

Date: Signature of the Applicant

## SPONSORSHIP CERTIFICATE

Mr/Ms/Dr \_\_\_\_\_

is an employee of our Institute / Organization and is hereby sponsored. He/She will be permitted to attend the programme in full, if selected.

Place: Signature of the Sponsoring Authority

Date: Office Seal

For any queries contact:

**Dr.M.Karthik Ph.D.,**

Associate Professor

**Chairman**

**DRDO Sponsored One day National Level Seminar on  
“Current Trends and Advances in Hypersonic  
Vehicles and its Challenges”**

Department of EEE

Kongu Engineering College

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## ABOUT THE COLLEGE

Kongu Engineering College (KEC) established in 1984, approved by AICTE, New Delhi, accredited by NAAC for 5 years with the grade of “A” and an autonomous institution affiliated to Anna University Chennai, has completed 35 years of dedicated and excellent service in the field of technical education. The college offers 14 UG, 19 PG and 16 research programmes in Engineering and Applied Sciences. It is one of the best self financing engineering colleges imparting high quality technical education in Tamil Nadu, India, and is well-known for its technical excellence, modern facilities, record of performance with excellent results and enterprising students. Ranked 2nd Position in Tamilnadu and 26th Position in India among Engineering Institutes in India (including IITs and NITs) by CSR Magazine. Ranked 1st Position in Tamilnadu and 39th position at all India level by “Outlook” magazine, 3rd Position in Tamilnadu and 32nd Position in private Engineering colleges in India by “The Week” Magazine. Ranked 135th position in private Engineering colleges in India by NIRF ranking. It has an active Industry-Institute Partnership (IIP) Cell to interact with industries. Received Sustainable Institute Industry Partnership Award consecutively for two years (2014 & 2015) from the Institution in Society for Educational and Entrepreneurship Development, Chennai. It has got NBA accreditation for most of the UG programmes and is an ISO certified institution. It has also got the Best Engineering College award and the Best Principal Award from ISTE. It has established a Technology Business Incubator (TBI) supported by the Department of Science and Technology, Government of India, and won the National Award presented by the President of India on Technology Day in New Delhi. Its Entrepreneurship Management Development Cell (EMDC) won Best E-Cell, Entrepreneurship Eco System Builder Award 2015 from Ministry of Skill Development and Entrepreneurship at New Delhi, India. Kongu Engineering College has been awarded as the Most Clean Campus for the Year 2017 by AICTE.

## ABOUT THE DEPARTMENT

The Electrical and Electronics Engineering department occupies a prominent place in the chronicles of its academic history. The department has been consistently producing illustrious Engineering graduates of high caliber who occupy prestigious positions in the academic and industrial fields. The specialization of the faculty includes Power System Engineering, Power Electronics and drives, Energy Engineering, Applied Electronics, Control Systems, VLSI, Bio-Medical Engineering, Digital Signal Processing, Sensors and Networks, Computer Networks, Instrumentation and Control etc. The department offers four year UG programme in EEE and two year PG programmes in Power Electronics and Drives. The department has also carrying out many consultancy activities like energy auditing to many industries. EEE Department of Kongu Engineering College has bagged the National level award under the category “Best Industry linked Technical Institute for the Electrical Engineering stream”, on the survey organized jointly by AICTE and CII during June-July 2013, for the year 2012-13. Renewable Energy Research Centre has been established under Department of Science and Technology funded Rs.1 crore to conduct research in renewable energy and provide tangible outcome in the form of product development for the Academic year 2018-19.



**DRDO  
Sponsored  
National Level  
Seminar On**



**“Current Trends and Advances in  
Hypersonic Vehicles and its Challenges”  
(05.03.2021)**

**Chairman  
Dr.M. Karthik Ph.D.,  
IEI Young Engineer Awardee  
Associate Professor**

**Conveners  
Mr.S.Chandrasekar M.E.,  
Assistant Professor (Senior Grade)  
Mr.D.Sarathkumar M.E.,  
Assistant Professor (Senior Grade)**

Organized by  
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