

## NATIONAL ADVISORY COMMITTEE

### CHAIRMAN:

**Dr. V.K. Saraswat**

Scientific Advisor to Raksha Mantri  
DRDO HQR, New Delhi

### MEMBERS:

**Dr. Anjan Das**

Executive Director- Technology, CII, New Delhi

**Dr. A.R. Upadhyay**

Director, NAL, Bangalore

**Dr. B.N. Raghunandan**

IISc Bangalore

**Dr. B.V.R. Mohan Reddy**

CMD, Infotech Enterprises Ltd., Hyderabad

**Dr. Carsten Kopp**

General Manager, Bosch Ltd., Bangalore

**Dr. C.P. Ramanarayanan**

Director, VRDE, Ahmednagar

**Dr. K. Sridhara**

Executive Director (ER&D)

Turbo Energy Ltd., Chennai

**Dr. M.O. Garg**

Director, IIP, Dehradun

**Shri. Mayank Agochiya**

President, Ricardo India Private Ltd., New Delhi

**Shri. P. Sivakumar**

Director, CVRDE, Chennai

**Shri. P.S. Subramanyam**

Director, ADA, Bangalore

**Shri. P. Venugopalan**

Director, DRDL, Hyderabad

**Dr. R.K. Malhotra,**

Director (R&D), IOCL, Delhi

**Dr. R. Natarajan**

Former Director, IIT Madras

**Dr. R.R. Sonde**

Executive VP, Thermax India, Pune

**Shri. Ravindra Soman**

Principal Engineer, GE Energy, Bangalore

**Dr. T.L. Jose**

Director, NIT Calicut

**Dr. T. Sundararajan**

IIT Madras

## ORGANIZING COMMITTEE

### CHAIRMAN:

**Dr. T.L. Jose**

Director, NIT Calicut

### MEMBERS:

**Dr. K. Prabhakaran Nair**

Dean (PG&SR), NIT Calicut

**Dr. N. Ganesan**

Dean (P&D), NIT Calicut

**Dr. C.B. Sobhan**

Dean (C&SR), NIT Calicut

**Dr. C. Muraleedharan**

Professor, Dept. of Mechanical Engineering

**Dr. P.V. Ramachandran**

Professor, Dept. of Mechanical Engineering

**Dr. A. Ramaraju**

Professor, Dept. of Mechanical Engineering

**Dr. R. Vijayakumar**

Professor, Dept. of Mechanical Engineering

**Dr. V. Sivasubramanian**

Head, Dept. of Chemical Engineering

**Dr. Vineeth Kumar**

Professor, Dept. of Computer Science and Engineering

**Dr. K.S. Sivanandan**

Professor, Dept. of Electrical Engineering

**Dr. P.C. Subramanian**

Professor and Head, Dept. of Electronics &  
Communication Engineering

**Dr. R. Sridharan**

Professor, Dept. of Mechanical Engineering

## PROGRAMME COORDINATION COMMITTEE

### CHAIRMAN:

**Dr. S. Jayaraj**

Head, Dept. of Mechanical Engineering

### MEMBERS:

**Dr. K. Allesu**

Dept. of Mechanical Engineering

**Dr. N. Ramachandran**

Dept. of Mechanical Engineering

**Dr. Jose Mathew**

Dept. of Mechanical Engineering

**Dr. Ghulam Jilani**

Dept. of Mechanical Engineering

**Dr. M.L. Joy**

Dept. of Mechanical Engineering

**Dr. T. J. Sarvoththama Jothi**

Dept. of Mechanical Engineering

**Dr. V. Sajith**

School of Nano Science & Technology

**Dr. P. Arun**

Dept. of Mechanical Engineering

**Dr. Sudhakar Subudhi**

Dept. of Mechanical Engineering

**Dr. Santhosh G. Thampi**

Dept. of Civil Engineering

**Dr. Madhukumar**

Dept. of Computer Science and Engineering

**Dr. S. Ashok**

Dept. of Electrical Engineering

## THE COMBUSTION INSTITUTE-INDIAN SECTION (CIIS)

**Dr. V.K. Saraswat**

Chairman, SA to RM, New Delhi

**Dr. S. Manjappa**

Vice Chairman, BIET, Davangere

**Shri. P.K. Pandey**

Secretary

Vice President, Infotech Enterprises Ltd., Hyderabad

**Dr. A.M. Nagaraj**

Jt. Secretary, BIET, Davangere

**Dr. V. Raghavan**

Treasurer, IIT Madras

## EXECUTIVE COMMITTEE

**Dr. Amitava Datta**

Jadavpur University, Kolkata

**Shri. A.S. Thamilselvan**

BEML, Mysore

**Dr. C.G. Saravanan**

Annamalai University, Chidambaram

**Dr. C. Venkataramana Reddy**

GNIT, Hyderabad

**Dr. D.P. Mishra**

IIT Kanpur

**Dr. J.M. Mallikarjuna**

IIT Madras

**Shri. L.M. Naik**

Bosch Ltd., Bangalore

**Dr. P. Mohanan**

NIT Surathkal

**Dr. R.V. Ravikrishna**

IISc Bangalore

**Dr. U.S.P. Shet**

IIT Madras

**Dr. Vijay Kumar Reddy**

JNTU, Hyderabad

**Dr. V. Ramanujachari**

DRDL, Hyderabad

## EDITORIAL COMMITTEE

**Dr. V. Raghavan**, IIT Madras

**Dr. U.S.P. Shet**, Former Professor, IIT Madras

## ORGANIZING SECRETARY

**Dr. A. SHAIJA**

Department of Mechanical Engineering

National Institute of Technology Calicut

Calicut – 673 601 Kerala, India

E mail: ncicec2011@nitc.ac.in

0495 – 2286427, 2286401 (O)

Fax: 0495 2287250

Mobile: +91 9495892717

## FIRST ANNOUNCEMENT CALL FOR PAPERS

# 22<sup>nd</sup> NATIONAL CONFERENCE ON I. C. ENGINES AND COMBUSTION (22<sup>nd</sup> NCICEC, 2011)

10-13, December, 2011

ORGANIZED BY



Department of Mechanical Engineering  
NATIONAL INSTITUTE OF TECHNOLOGY  
CALICUT  
CALICUT – 673 601 KERALA INDIA



Under the auspices of  
**The Combustion Institute – Indian  
Section (CIIS)**

Websites:

[www.ncicec2011.nitc.ac.in](http://www.ncicec2011.nitc.ac.in)  
[www.combustioninstitute-indiansection.com](http://www.combustioninstitute-indiansection.com)

## ABOUT KERALA

Kerala state is located in the south-west part of India inhabited by a fully literate



population and blessed with panoramic backwater stretches, lush paddy fields, highlands, hills and hillocks, associated with many legends. Kerala is illustrious for its rustic natural beauty, thick with rivers, lagoons and mountains. Kumarakom (serene, emerald green peninsula set in the backdrop of Vembanad Lake), Malabar (the Western Ghats Hill Resorts), Kovalam (for the refreshing bath in the cool sea), Munnar (the chill in Kerala round the year), Kochi (the Queen of Arabian sea) and Alleppey (the Venice of the East) are major tourist destinations in the Kerala state, fondly known as the 'God's own country'.

## ABOUT CALICUT



Calicut (Kozhikode), the place where Vasco De Gama landed during the dynasty of Samoothiri (Zamorins), is one of the major centers of higher education, learning and research in Kerala. Presently Kozhikode district is the hometown of institutions of national eminence and glory including NITC, IIMK, DOEACC, CWRDM, DRDO Ship Design and Manufacturing Centre, etc. Some of the local attractions include Kozhikode Beach, Mananchira Square, Kappad Beach, Kadalundi Bird Sanctuary, Beypore, Thusharagiri Waterfalls, Pazhashiraja Museum, Thali Temple, Mother God Cathedral, and Kuttichira Masjid.

Wayanad the neighboring district, known as the land of spicy hills, offers excellent wild-life viewing opportunities, an insight into tribal culture evocative of earlier centuries, trekking and other adventure activities. Almost all the crops like coconut, areca nut, rubber, tea, coffee, pepper, ginger, turmeric, cocoa, cardamom, clove and vanilla are grown here. Pookode lake, Lakkidi View Point, Banasura Sagar Lake, Thirunelli Temple, Papanasini, Pakshi Pathalam, Tholpetty Wild Life Sanctuary, Kuruva Island, Muthanga Wild Life Sanctuary, Edakkal Caves, Ambalavayal Heritage Museum, Meenmutty Waterfalls, Kanthanpara Waterfalls, Soochippara Waterfalls and Chembra Peak are the major attractions in Wayanad.

## TRAVEL

By Air: Calicut is directly connected with all the countries. Calicut International Air Port is just 45 km and Cochin International Air Port, about 200 km from

the institute. Domestic flights are available from other airports in India like Mumbai, Chennai, Delhi, Bangalore, Goa and Coimbatore to Calicut.

By Rail/Road: Direct trains are available to Calicut (Kozhikode) from all major cities in India. Luxury buses are operating from Mumbai, Bangalore, Chennai and other cities in South India to Calicut.

## ACCOMMODATION

Hotels in Calicut provide spectacular services that add memorable experience for the tourists visiting this dream destination. These hotels are quite compatible to the needs of the tourists as they are pocket friendly and provide safe and comfortable stay. Special yoga lounge and ayurvedic treatment facilities are available at major hotels in Calicut, attracting both domestic and international travelers.

## ABOUT NIT CALICUT



Set in a picturesque landscape at the foothills of the Western Ghats, National Institute of Technology Calicut (NITC) is located about 22 kilometers north-east of Calicut City. National Institute of Technology Calicut is a Technical Institution of national importance set up by an Act of parliament (Act 29 of 2007) namely, the National Institute of technology Act 2007, which received the assent of the President of India on 5th June, 2007.

NITC has thirteen departments, six centers and three schools. It offers nine undergraduates and twenty four postgraduate programmes apart from Ph.D. The institute has good infrastructure in computing, information technology, laboratories and central library including digital library. All departments have separate computing facility in addition to the central facility.

## ABOUT DEPARTMENT

Department of Mechanical Engineering, the largest department in the Institute, offers regular undergraduate, postgraduate and doctoral degree programmes. It also offers part time doctoral degree programmes, mainly meant for those employed in industries and academic institutions. It offers a number of continuing education programmes too for industry personnel. Summer/Winter schools sponsored by the AICTE/ISTE have also been organized by the department. The faculties also provide guest lectures at many of the neighboring institutions. Besides teaching, the faculty members are involved in consultancy work (Design & Development, Energy Auditing, Industrial Sickness Evaluation, Testing etc.), sponsored research work (sponsored by DST, AICTE, ARDB etc.), and product development.

## BACKGROUND

National Conference on I. C. Engines and Combustion has been biennial event under the auspices of the Combustion Institute-Indian Section. This conference provides a unique forum for engineers and scientists from academic/research laboratories/institutions/industries both from India and abroad to meet and exchange technical information on new developments in the field of I.C. Engines, Combustion and Propulsion. The deliberations of the conference will be focused on various themes under the following major thrust areas:

## IC ENGINES

Alternative Fuels, Green fuels, Advanced IC Engine Technology, HCCI engines, Engine Diagnostics, Emissions and control

## COMBUSTION

Basic Combustion, Combustion Diagnostics and instrumentation, Combustion of hydrogen, Combustion instability, Combustion in rockets and air-breathing engines, Supersonic Combustion, Industrial Combustion, Coal gasification and combustion, IGCC and UGC, Industrial applications of coal combustion

## MODELING AND SIMULATION

CFD application to reactive flows, Modeling of Combustion Processes and Systems

## CONFERENCE AGENDA

Plenary Lecture on Conference Theme  
Invited and Keynote Addresses  
Technical Sessions and Presentations  
Technical Exhibition

## CALL FOR PAPERS

Technical research papers reporting original works on the various themes given under major thrust areas listed above are invited for presentation in the conference. The authors are requested to submit a full length paper containing an abstract, scope, methodology and results of the work. The length of the paper inclusive of figures, tables etc., should not exceed 8 pages. Text on A4 paper size must be typed in Times New Roman 10 Font with standard margin indicating name(s) and address(es) for communication. The template can be downloaded from the website [www.ncicec2011.nitc.ac.in](http://www.ncicec2011.nitc.ac.in). The prospective authors are invited to submit the full paper through email to the organizing secretary of the conference at [ncicec2011@nitc.ac.in](mailto:ncicec2011@nitc.ac.in).

The selection of contributed papers for presentation will be based on peer review. The intimation regarding acceptance of the paper will be mailed to the authors. Two awards will be given by the organizers, one for the 'Best paper' and the other for the 'Best presentation' in the conference.

## IMPORTANT DATES

Receipt of full paper 15<sup>th</sup> September 2011  
Acceptance of paper 15<sup>th</sup> October 2011  
Registration due 30<sup>th</sup> October 2011

## REGISTRATION FEE (PER DELEGATE)

Participants from industry	: Rs.5000
From Govt. organizations, R&D labs & Educational Institutions	: Rs.3000
Life Members of Combustion Institute	: Rs.2500
Students Participants	: Rs.1000
Overseas Industrial Delegates	: US\$ 250
Overseas Delegates	: US\$150

Payment of the registration fee has to be made by a crossed demand draft drawn in favor of "The Organizing Secretary, NCICEC – 2011, Payable at State Bank of India, NIT Calicut Branch (Code 2207). The fee includes conference kit, refreshment and lunch during the days of the conference. For student participants the registration fee does not include the cost of conference proceedings and kit.

Assistance to participants for accommodation at hotels of Calicut will be arranged on prior request.

## ADDRESS FOR COMMUNICATION

Dr. A. SHAIJA

Organizing Secretary, NCICEC – 2011  
Department of Mechanical Engineering  
National Institute of Technology Calicut  
NIT Campus (PO), Calicut – 673 601 Kerala, India  
[ncicec2011@nitc.ac.in](mailto:ncicec2011@nitc.ac.in)

## EXHIBITION & SOUVENIR ADVERTISEMENT

The Industrial establishments and other institutions are encouraged to exhibit their products by setting up stalls at the conference venue and to advertise in the souvenir to be brought out during the conference.

## ADVERTISEMENT TARIFF IN THE SPECIAL PUBLICATION

(All prices are in Indian Rupee)

Back cover (color)	: Rs.1,00,000/-
Inner Cover s(color)	: Rs. 50,000/-
Inside full page color	: Rs.35,000/-
½ page color	: Rs.25,000/-

**POST CONFERENCE TOUR:** After the conference, tour will be arranged on payment basis on 13<sup>th</sup> December. Interested participants can indicate their choice in the registration form. The details of the tour package will be made available in the website.