

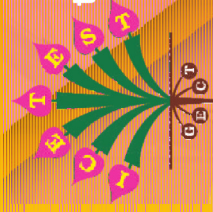
**INTERNATIONAL CONFERENCE ON  
PROGRESSIVE DEVELOPMENTS IN MECHANICAL ENGINEERING  
(PDME-2015)**

**December 9-11, 2015**

*Organized by*  
**DEPARTMENT OF  
MECHANICAL ENGINEERING**  
Govt. Engineering College Trichur



**Under the Aegis of  
the Fourth International Conference at  
Govt. Engineering College Trichur  
Thrissur 680 009, Kerala (St.), India**  
on



**EMERGING TRENDS IN ENGINEERING, SCIENCE & TECHNOLOGY  
(ICETEST - 2015)**

*Funded by* Technical Education Quality  
Improvement Programme (TEQIP) - Phase II

[www.icetest.gectcr.ac.in](http://www.icetest.gectcr.ac.in)

**ADDRESS FOR CORRESPONDENCE**

The Co-ordinator (PDME - 2015)

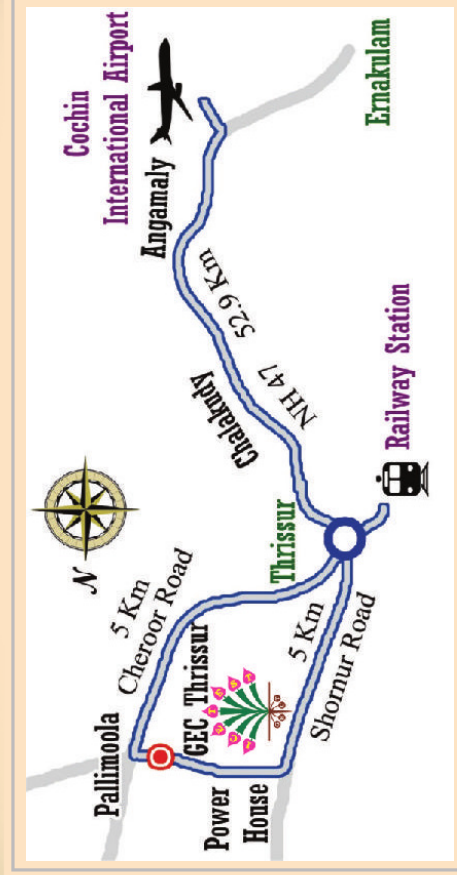
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**ROUTE MAP**



## CONFERENCE THEME

Govt. Engineering College Trichur (GECT) has been organizing its biennial International Conference on the title theme 'Materials for the Future' (ICMF) since the year 2009, and the last conference under ICMF was held in the year 2013. The fourth International Conference in this series is being held from 9<sup>th</sup> to 11<sup>th</sup> December 2015, with the main conference theme having been revised to a broader and more comprehensive one, namely 'Emerging Trends in Engineering, Science and Technology' so as to cater to all disciplines of Engineering, Technology and supporting streams of Science. Accordingly, all the International Conferences henceforth organized in GECT would be titled 'International Conference on Emerging Trends in Engineering, Science and Technology- ICETEST', and would be materialized by the constituent international conferences organized by the major Engineering and Science Departments of the institution, on sub-themes of current interest and development in the respective disciplines. It is hoped that the broadened scope/ regime of the revised title would enable the conference to bring together on to one platform the current advancements in all disciplines of studies under Engineering and Science, in which the host institution, GECT has established itself as a highly successful premier institution during the last over five decades. The ICETEST - 2015 will have eight constituent conferences; one each held in the Departments of Civil Engineering, Mechanical Engineering, Electrical & Electronics Engineering, Chemical Engineering, Electronics & Communication Engineering, Production Engineering, Computer Science & Engineering and School of Architecture, in the thrust areas of the respective disciplines.

The Department of Mechanical Engineering, Govt. engineering College Trichur on this occasion, announces its International Conference on the sub-theme 'Progressive Developments in Mechanical Engineering (PDME-2015)' under the umbrella of ICETEST - 2015.

## CONFERENCE OBJECTIVE

In the modern world, technology has become an integral part of human life. The favorable environment evolved as a consequence of advancements in communication, computing and globalization, has opened up a potential market for the right technology in addition to the intellectual satisfaction obtained from its development. As a result, a number of novel ideas as well as innovations in science and technology are being reported each day. Mechanical engineering, while deepening its roots in the traditional areas of mechanics and thermal science has also expanded its horizons to novel interdisciplinary areas such as Nano-technology, Micro-fluidics, Micro-Electro-Mechanical Systems (MEMS) and even Biological heat transfer. In this context it is important to communicate, discuss and evolve new ideas that could benefit society. The present conference aims to provide a single platform to highly desirable confluence of the academia, the practitioners, the constructors and the researchers associated with different areas of mechanical engineering. The delegates can share their experiences, achievements and findings derived from their research, field practice & implementation, and even the teaching-learning process. This will enable them to sharpen their faculties in all perspectives of the subject to help them keep abreast of the latest developments, build research and academic relationships, and also identify areas and agencies for future mutually beneficial collaborations.

In tune with the above objective, the Conference Secretariat requests the pleasure of participation from researchers, practitioners, academia and all interested in/ associated with the theme of 'Progressive Developments in Mechanical Engineering' either by contributing research papers/articles for oral/poster presentation or by attending the conference. The papers may be related to one or more of the topics listed in the Section on Conference Topics.

## CONFERENCE TOPICS

The International Conference on PDME - 2015 organized as part of ICETEST - 2015 will ensure deliberations on a slew of related topics which include but are not limited to the following

1. Thermal Sciences and Transport Phenomena
2. Manufacturing Technology and Material Science
3. Mechanical Design, Vibration and Tribology
4. Renewable Energy and Alternate Fuels
5. Micro and Nano-Technology
6. Metrology and Instrumentation
7. Fluid flow and fluid power systems
8. Industrial Management and Engineering
9. Mechatronics, Robotics and Automation
10. Numerical Models and Computational Methods

## CALL FOR PAPERS, GUIDELINES FOR SUBMISSION AND REGISTRATION

The prospective authors are called up on to submit full papers incorporating the original research work pertaining to the topics indicated above. The submission will be strictly online through the Website of ICETEST - 2015. The papers must provide a clear idea on the purpose of research, methodology used, major findings and relevant references, and shall not be already submitted/ published/ under consideration in any other conferences or journals. The guidelines and style of formatting to be adopted are given in the conference web site. Kindly visit the Conference Web Site at [www.icetest.gectr.ac.in](http://www.icetest.gectr.ac.in) for further details. It is mandatory for at least one author of an accepted paper to register for the conference. Only the papers of registered authors will appear in the journal. If an author has more than one accepted paper, each paper has to be registered.

The papers for PDME - 2015 shall be submitted to **Track II - Mechanical Engineering: International Conference on Progressive Developments in Mechanical Engineering - 2015**, out of the eight tracks provided in the web site of ICETEST - 2015.

## MODE OF PUBLICATION & CIRCULATION OF REGISTERED PAPERS

All the accepted papers registered with the conference will be published in the conference proceedings, and also by the **Research Publishing Services** or such journals having good impact factor (subject to acceptance by the journal), will be made available in the **RPS Online** and will be indexed in **CrossRef**. In addition, they will be submitted for possible indexing in all the major indexing services like **EI, ISI Web of Science, DBLP, IET Inspec, Scopus, etc.**

## IMPORTANT DATES

Last date for submission of manuscript	: July 15 <sup>th</sup> , 2015
Notification of acceptance of manuscript	: August 15 <sup>th</sup> , 2015
Last date for submission of camera ready paper	: August 31 <sup>st</sup> , 2015
Registration for the conference	: August 31 <sup>st</sup> , 2015
Dates of conference	: 09-11 December 2015

## ABOUT TRICHUR, THE CULTURAL CAPITAL OF KERALA



Trichur, the anglicized form of the vernacular name Thrissur, is the fourth largest city in Kerala. Thrissur is also known as the Cultural Capital of Kerala due to its cultural, spiritual and religious heritage. The famous institutions of Govt. of Kerala, promoting arts, literature and culture such as Kerala Sangeetha Nataka Academy, Kerala Sahitya Academy, Kerala Lalithakala Academy and the deemed University of Kerala Kalamandalam are located in Thrissur District. The most colourful and spectacular temple festival of Kerala attracting tourists all over the world, namely Thrissur Pooram, is observed in Thrissur annually. Thrissur is well known for the large number of famous temples, churches and mosques including Guruvayoor Sri Krishna Temple, Sri Vadakkunnathan Temple, Church of Our Lady of Lourdes, Church of Our Lady of Dolours and Cheraman Juma Masjid. Being located in the central region of Kerala, Thrissur is close to many of the well known tourist attractions like Athirappally Waterfalls, Munnar, Thekkadi, Kumarakom and Kovalam. Thrissur is also the birth place of the legendary world class mathematician-astronomer Sangamagrama Madhavan of the fourteenth century, who made very notable contributions in astronomy, trigonometry, calculus, geometry and algebra apart from being the first mathematician in the world to introduce the power series expansion of the trigonometric functions of sine, cosine, arctangent and the presently well known Madhava-Gregory-Leibnitz series.

## ABOUT KERALA STATE

The State of Kerala presents unique geographical features attracting tourists from around the globe for its scenic backwaters and lagoons, lush greenery and clourful and enchanting festivals. With the Arabian Sea on the west, the Western Ghats towering to altitudes of 500 to 2700 metres on the east, Kerala is blessed with long scenic coast lines, rivers and hill stations. It is replete with tranquil stretches of backwaters, rare wildlife, waterfalls, sprawling plantations and verdant vegetations. Kerala is also a land to Ayurvedic Resorts, historic and cultural monuments and a variety of martial art forms, all of which offer a unique experience par excellence. With cent percent literacy and world class health care systems, Kerala has the lowest infant mortality and the highest life expectancy rates among Indian States.

## ABOUT THE DEPARTMENT OF MECHANICAL ENGINEERING, GOVT. ENGG. COLLEGE TRICHUR

The Department of Mechanical Engineering came into existence at the very inception of the College, and has been instrumental in moulding the students into eminent engineers. It offers B. Tech. in Mechanical Engineering at the undergraduate level and two M. Tech. Programmes, namely, Production Engineering started in 1971 and Internal Combustion Engines and Turbo-Machinery started in the year 2010. The department is an approved research center for Ph. D. programmes under the University of Calicut, and also under the QIP Scheme of Ministry of Human Resources, Govt. of India. The department has, since its very inception, executed a large number of consultancy and testing activities for various clients such as Government Departments, Public and Private Sector Enterprises, etc. within and outside Kerala.

## ABOUT THE HOST INSTITUTION, GOVT. ENGINEERING COLLEGE TRICHUR

Govt. Engineering College Trichur has been one of the premier institutions for quality technical education in the state of Kerala, India, since its establishment in the year 1958. The second oldest Engineering College of the region, and the first established after formation of the State of Kerala, it is presently affiliated to the University of Calicut, and offers undergraduate degree programmes of B. Tech. in seven Engineering disciplines and B. Arch. in Architecture. It offers post graduate programmes of M. Tech. in ten disciplines spread under the various engineering departments and MCA programme under a separate department. Moreover, the institution is a major research centre for four branches of Engineering under the University of Calicut, and is an approved centre for research under the Quality Improvement Programme of MHRD, Govt. of India. With the funding from the TEQIP - Phase II since 2010, the institution has been able to scale up the research facilities, strengthen the post-graduate and undergraduate programmes leading to improved employability of the graduates. The large number of University ranks bagged every year by the graduates from GECT is testimony to the very high academic standards maintained in the institution. The College Campus, spread over 75 acres of prime land, is located at Ramavaramapuram, 6km from Trichur town, 6km from Trichur Railway Station and around 50km from Cochin International Airport. The College has a very renowned alumni strength, many of whom are internationally and nationally acclaimed professionals, scientists, CEOs and entrepreneurs.

## REGISTRATION FEES

International Delegates

From Academic/R & D Organisations : Rs. 5,000/-  
Students/Research Scholars : Rs. 3,000/-

National Delegates

From Industry : Rs. 5,000/-  
From Academic/R & D Organisations : Rs. 3,000/-  
Students/Research Scholars : Rs. 2,000/-

## ACCOMMODATION

Accommodation shall be arranged in the nearby hotels for the interested delegates, on advance payment to the Conference Secretariat. A list of quality hotels within 5 km radius from GECT is provided in the conference web site.

## MODE OF PAYMENT

The registration fees may be remitted in the following modes

1. Demand Draft in favour of ICETEST - 2015 payable at Thrissur, India.
2. NET Banking with the relevant information furnished herein below

Account Name : ICETEST - 2015  
Account Number : 67321934020  
Bank Name : STATE BANK OF TRAVANCORE  
Branch Name : CHEROOR  
Branch Code : 7207  
IFSC Code : SBTR0000207  
Swift Code : SBTRINBBFED  
MICR Code : 680009010



## SOCIAL / CULTURAL EVENTS

A cultural programme showcasing the rich traditions and arts of Kerala will be arranged in the evening of the 2<sup>nd</sup> day of the conference, for the benefit and in honour of the delegates.

## CONFERENCE SECRETARIAT

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- Prof. C. P. Sunilkumar**  
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Professor, Jamia Millia Islamia, New Delhi.
- Dr. C.V. Jawahar**  
Professor, International Institute of Information Technology Hyderabad, India

### ORGANISING COMMITTEE

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- Organising Secretaries (ICETEST - 2015) : **Dr. Jayanand B.**, Professor (Electrical & Electronics Engg.), **Dr. Vijayan P.**, Professor (Civil Engg.)
- Treasurer : **Prof. Ajay James**, Associate Professor (Computer Science)
- Co-ordinator (PDME - 2015) : **Dr. Jithesh P. K.**, **Mr. Rahul K. R.**, Assistant Professors (Mechanical Engg.)