

## ISAM

Pre-Conference Workshop

# **HIGH TEMPERATURE DESIGN AND ANALYSIS**

**July 4, 2017**

**Department of Applied Mechanics, MNNIT Allahabad**

## **Organizing Committee**

**Chairman:** Prof. P. Chellapandi (Vellore Institute of Technology, Chennai Campus)

**Co-Chairman:** Dr. R.Suresh Kumar (Head, High Temperature Analysis Section, IGCAR, Kalpakkam)

**Secretary:** Dr. Ashutosh Kumar Upadhyay (M.N.N.I.T. Allahabad)

### **Registration Fees:**

Students: Rs. 1500 (Rs. 1000 for ISAM members)

Others: Rs. 2500 (Rs. 2000 for ISAM members)

## **Brief Description of Workshop**

Design and development of high temperature materials and components is a frontline topic and provides high impetus for the researchers, engineers and technologists to work with synergy. Emphasis on clean coal technologies, safe and reliable operation of high performance components, life extension of power plants, fast breeder and fusion reactor technologies, demand significant R&D in this specialized area. Operating temperatures vary from 500-1000° C and design life of 40 years and above. Reliable design of components operating under these challenging operating conditions should adequately address all the possible failure mechanisms that are associated with creep, fatigue and creep fatigue interactions predominantly under thermo-mechanical loadings.

Hence, it is considered very important, particularly for the young researchers, practicing engineers and technologists from academic institutions, R&D establishments and Industries, to have a decent knowledge on this topic.

With this objective, a dedicated workshop is planned on this topic. The eminent professionals from India and abroad will deliver lectures comprehensively covering all ingredients of the topic, namely operating conditions and experience of high performance systems and components, advanced materials, material data and synthesis, failure modes and design criteria, background of international codes on materials and design methodologies (ASME Section VIII and Section III), French code RCCMR, development and validation of inelastic and viscoplastic material constitutive models including the implementation into the commercial finite element software, simplified and detailed inelastic methods to comply the specified design code requirements, robust benchmark exercises for design validation, In addition, assessment of defects at high temperatures will be covered with adequate depth.

It is targeted that the participants should acquire adequate knowledge and information to master this technology in their academic and professional carrier.

**Registration Form**<sup>1</sup>

**Name:**

**Affiliation:**

**Address:**

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**Method of Payment**<sup>2</sup>: (a) Online Transaction Details

**OR**

(b) Demand Draft Details<sup>3</sup>

<sup>1</sup>: Filled in registration form can be sent to [ashutosh@mnnit.ac.in](mailto:ashutosh@mnnit.ac.in) or [incam2017@gmail.com](mailto:incam2017@gmail.com)

<sup>2</sup>: Payment should be made online (**Preferred mode of payment**) using the link provided on the conference website [www.incam2017.in](http://www.incam2017.in) OR DD drawn in favour of **INCAM2017** and payable at Allahabad along with registration form can be sent to following address via speed post<sup>3</sup>:

**Dr. A.K. Upadhyay**

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