

## WEB CONFERENCE



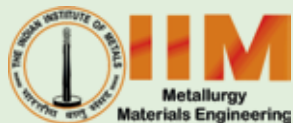
# 8th International Conference on **CREEP, FATIGUE AND CREEP-FATIGUE INTERACTION**

**August 24-27, 2021**

## Organisers



Indira Gandhi Centre for Atomic Research  
Kalpakkam, India



Indian Institute of Metals  
Metal Science Division and  
Kalpakkam Chapter

The Eighth International Conference on Creep, Fatigue and Creep-Fatigue Interaction (CF-8) is being organized by Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, India, in association with the Metal Sciences Division of the Indian Institute of Metals and the Kalpakkam Chapter of the Indian Institute of Metals during August 24-27, 2021. The first Conference in this series was held in the year 1987 and the latest edition (CF-7) in 2016 attracted over 300 delegates including forty two overseas participants. Eminent researchers and engineers working in the areas of creep, fatigue, creep-fatigue interaction, materials development and high temperature design are being invited to share their knowledge and expertise on these topics during the conference. Contributory papers are solicited for the conference which would be organized as a WEB CONFERENCE in view of the uncertainties associated with COVID-19. The language of the conference is English.

## SCOPE OF THE CONFERENCE

Performance of materials under creep, fatigue and combined creep-fatigue loadings is of utmost importance in the design, operation and reliability of high temperature components. Apart from renewable energy alternatives, advanced nuclear reactors and fossil fuel fired advanced ultra supercritical power plants provide cleaner energy options that help combat challenges involved in addressing the growing global energy demands with reduced greenhouse emissions. These involve multifaceted technologies and operating environments which pose new challenges for materials development and understanding of their mechanical behaviour. New materials are being developed to meet the applications for components operating at increasingly higher temperatures and aggressive environments. Widespread damage due to creep and fatigue encountered in aviation and transport industries adversely impact safety and reliability of associated structures. Besides, extension of the useful service life of existing operating power plants is attractive in view of the high capital costs associated

with the construction of new plants. Structural integrity assessment and life management require innovative methods for materials testing, assessment of damage, remnant life prediction and materials modeling. CF-8 aims to bring together experts working in the areas of creep, fatigue and creep-fatigue interaction, development of high temperature materials and life assessment so as to facilitate mutual interaction and exchange of knowledge and experience. It would also serve as a platform for discussion on the current advances and identify future R&D needs and collaborations in the above areas.

Following are the broad areas included in the scope of the conference:

- Creep deformation, damage and life assessment
- Low cycle, high cycle, very high cycle, thermomechanical and fretting fatigue
- Creep-fatigue interaction
- Multiaxial creep, fatigue and component testing
- Modeling and simulation of creep and fatigue deformation and damage
- Creep, fatigue and creep-fatigue crack growth
- Creep and fatigue of weld joints, structural integrity and remaining life assessment
- Environmental effects including corrosion on creep and fatigue behaviour
- Small scale testing to assess creep and fatigue behaviour
- Design against creep and fatigue and their interaction
- Design codes – application for creep and fatigue
- Materials for fission and fusion nuclear reactors
- Materials for advanced ultra supercritical power plants
- Materials for aerospace and defence applications
- Irradiation effects on mechanical properties
- Remnant life assessment and life extension
- Failure analysis

## RELEVANCE

**Delegates:** The conference would be of relevance to Researchers, Academicians, Design Engineers, Alloy Designers, Regulatory Authorities, Failure Analysts etc.

**Organisations:** Research and Development Organisations, Academic Institutions, Materials Manufacturers, Nuclear, Fossil fired, Automobile, Aerospace, Chemical and Petrochemical Industries and related specialists.

### CALL FOR ABSTRACTS

Authors are invited to submit abstracts of their papers in not more than 250 words latest by **March 31, 2021**. The text shall be typed in 12 point Times New Roman font with single line spacing and full justification. Detailed affiliation of all authors along with the e-mail address of the corresponding author shall be provided in the abstract. Submission has to be done online through the website [www.cf-8.in](http://www.cf-8.in) as per the template specified.

### PUBLICATION

Accepted abstracts will appear in the abstract book cum souvenir. It is planned to bring out the full papers in the form of special issue in a relevant journal after peer review. Further details along with necessary guidelines for submission of full manuscripts will be notified on the website in due course.

### REGISTRATION FEE

(18% GST Extra)

Indian delegates	Rate	
	INR	USD
Members of IIM*	Rs. 4,000/-	
Non-members	Rs. 5,000/-	
Students	Rs. 3,000/-	
Overseas delegates		\$ 200/-

\*The Indian Institute of Metals

Participants of CF-8 are requested to register themselves before **June 1, 2021**.

Payments towards registration fee, sponsorship etc. shall be made in favour of **CF-8** payable at State Bank of India, as per details given below:

A/C No.	39127750441
Bank	State Bank of India
Branch	Meenambakkam Airport
IFSC Code	SBIN0005789
SWIFT CODE	SBININBB298

### SPONSORSHIP OPPORTUNITIES

The conference will provide a unique opportunity for organisations and industries to promote their products/services to the focused national and international delegates. The sponsors will have an excellent opportunity to interact online with engineers / scientists / academicians during the conference. Sponsorship opportunities and souvenir advertisement details are given below.

Level of Sponsorship	Fee*	Benefits to Sponsor
Technical Session	Rs. 1,00,000 (US \$ 1,400)	<ul style="list-style-type: none"> <li>Logos on the conference website</li> <li>Announcement in the beginning and end of the sponsored session</li> <li>Free Registration</li> </ul>

\*18% GST Extra

### SOUVENIR - ADVERTISEMENTS

Paper size: A4, Print Area: 17×24 cm

Print material required from the advertiser: soft copy.

Advertisement Details	Fee*
Back outside cover page – Colour	Rs. 1,00,000/- (US \$ 1,400)
Inside cover pages – Colour	Rs. 75,000/- (US \$ 1,100)
Full page (Inside) – Colour	Rs. 50,000/- (US \$ 700)
Full page (Inside) – Black & White	Rs. 35,000/- (US \$ 500)
Half page (Inside) – Black & White	Rs. 25,000/- (US \$ 350)

\*18% GST Extra

### INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH

Indira Gandhi Centre for Atomic Research was established in 1971. The Centre is engaged in broad-based multidisciplinary programmes of scientific research and advanced engineering directed towards the development of fast breeder reactor technology in India. IGCAR has successfully operated the Fast Breeder Test Reactor (FBTR) for the last thirty four years with a unique carbide fuel which laid the foundation for the 500 MWe Prototype Fast Breeder Reactor (PFBR) which is in an advanced stage of completion at Kalpakkam. KAMINI, a unique research reactor using a U233 based fuel, is also operational at IGCAR. The Centre has established a strong base in a variety of disciplines related to this advanced technology. The two commercial reactors of Madras Atomic Power Station are also located at Kalpakkam.

### IMPORTANT DATES

Abstract submission	<b>March 31, 2021</b>
Notification of abstract acceptance	<b>April 20, 2021</b>
Submission of full manuscript	<b>June 15, 2021</b>
Registration of delegates	<b>June 1, 2021</b>

### ORGANISING COMMITTEE

Dr. Shaju K. Albert (Chairman)

Dr. R. Divakar (Co-Chairman)

Dr. M. Vasudevan (Co-Chairman)

Dr. A. Nagesha (Convener)

Dr. G.V. Prasad Reddy (Co-Convener)

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