Is there a better solution?
About the Conference

We heartily welcome you to FatigueDurability India 2016 – 2nd International Conference on Fatigue, Durability and Fracture Mechanics and Symposium on Condition Assessment / Residual Life Assessment and Extension to be held at J N Tata Auditorium, NSSC Complex, Indian Institute of Science, Bangalore from 28-30th September 2016.

Market demands, consumer expectation, engineering product design challenges, safety requirements, and adaptation to changing environmental conditions are growing day by day. Designers are facing ocean of challenges to meet this demand in respect of expectation of efficient, safe, long life, durable, reliable, cost effective products in a shortest possible lead time. Innovations are inevitable to achieve best solutions. However, it makes engineering product designers challenge more complex in acquiring the knowledge of physics behind phenomenon associated with fatigue, fracture, material, process, product design, validation techniques & verification procedures to meet the real world challenge. It is the need of the hour to acquire, adopt and excel in this knowledge.

Further, On the other hand, it is a billion dollar question to repair & re-use or reject the existing structures, which are subjected to all kind of environments, service loads, and abusive conditions over the years. How safe are they?, Can we continue with same condition, then how long? Is it repairable/reusable if yes, then how? or reject them - how to come to a judgement of rejecting them. Tons of questions in the engineers mind need answers. Condition assessment of these structures requires an interdisciplinary approach of study of material, NDT, fracture mechanics & life assessment techniques.

FatigueDurability 2015, first time created a platform for multi-disciplinary discussion. We thank all for the overwhelming response. 600 people participated, 80+ papers presented, 25+ experts' shared expert keynote and more than 15 companies exhibited the technologies.

Moving along, as a follow up of last year conference, FatigueDurability India 2016 is planned this September 28-30th @ J N Tata Auditorium, Indian Institute of Science, Bangalore. FatigueDurability India 2016 brings experts from different part of the world to ensure rigorous technical experience for cross disciplinary interactions.

This 2nd International Conference & Exhibition brings industrial experts and academicians on a single platform to facilitate the exchange of ideas and advancements in the field of fatigue, durability and fracture mechanics and its applications. There will be an exhibition to showcase the technological advancements and paper presentation to share the knowledge with real life cases.

The Conference focuses on the covering wide spectrum of topics from design, engineering, testing and computational evaluation of the component / system for fatigue, durability and fracture mechanics aspects. There will be a forum of interdisciplinary discussion on working aspects related to material testing, evaluation of damage, NDT, failure analysis, FEM analysis, fatigue & fracture, processing, performance, reliability and so on. Participants are encouraged to bring their queries, problems and pose to the expert panel and derive the solution.

Design engineers, failure analysts, maintenance engineers, certification personnel, R&D professionals involved in auto, aero, power plants, marine, offshore, manufacturing, consumer durables, defense services, offshore structures, piping & pressure vessel, and general engineering sectors can participate in the conference & exhibition.

For more details about the conference login to www.2016.fatiguedurability.com. We request you to make use of this opportunity to interact, network with the professionals & experts in the field and be part of the FatigueDurability Community.

We heartily welcome you to FatigueDurability India 2016.
Looking forward for your active Participation
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<td>Life Prediction methodologies for Structural Metals, Alloys, Polymer, Composites &amp; Engineering Materials</td>
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<td>Calculation of stress intensity factors, critical crack size</td>
<td># 28 (Old No 619/1), 2nd Floor, 36th Cross, 2nd Block, Rajajinagar, Next to Srinivasa Kalyana Mantapa, Bangalore-560010 India</td>
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<td>Effect of multi-site damage</td>
<td>Ph/Fax: +91 80 23320171 / 49539628</td>
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<tr>
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<td>Mobile : +91 9900138009/9900137005</td>
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**CONFERENCE VENUE**

J N Tata Auditorium  
Indian Institute of Science  
National Science Symposium Complex, Sir CV Raman Avenue, Bengaluru, Karnataka 560012

**CALL US FOR ANY QUERIES**

Registration:  
Ms Abhinanditha, info@fatiguedurability.com | 9902900722

Exhibition:  
Mr. Arun, exhibition@fatiguedurability.com | 9900138009

Paper Presentation:  
Ms. Nethra, nethra@fatiguedurability.com | 9900137005
Distinguished Keynote Speaker

Recent advances in master S-N curve method for fatigue evaluation of welded structures

Professor Pingsha Dong
Professor, Naval Architecture and Marine Engineering
Professor, Mechanical Engineering
Director, Welded Structures Laboratory
University of Michigan, Ann Arbor, MI

Honorary Key Note Speaker

Prognosis Analysis of Crack Growth in Non-Linear Problems

Padmashri Bhagavatula Dattaguru
Former Professor,
Dept. of Aerospace Engineering,
Indian Institute of Science, Bangalore

Special Keynote Speakers

Fracture mechanics based structural integrity of components – overview of material characterization and predictive modelling under environmentally assisted creep/fatigue condition

Professor Kamran Nikbin
Professor of Structural Integrity
Faculty of Engineering,
Department of Mechanical Engineering
Imperial College, London

Application of acoustic emission method to fatigue fracture mechanics

Professor Kang Yong Lee
Professor
State Key Laboratory of Structural Analysis for Industrial Equipment,
Department of Engineering Mechanics,
Dalian University of Technology, Dalian, P R China

Repair of Distortion-Induced Fatigue Damage in Steel Bridges

Professor Adolfo B. Matamoros
Peter T. Flawn Professor
Department of Civil and Environmental Engineering
University of Texas at San Antonio

Recent Developments in Plasticity and Ductile Fracture Modeling

Professor Xiaosheng Gao
Professor
Department of Mechanical Engineering
The University of Akron
Akron, U.S
Invited Keynote Speakers

**Fatigue durability of materials – effects of surface degradation**

*Dr. Anand K*
Senior Engineering Manager  
Materials, Repair and Component Development & Testing  
GE Power, GE India Technology Centre, Bangalore India

**Residual Life Assessment & Extension of Engineering Components**

*Dr. Rabindra Nath Ghosh*
Chair Professor  
Metallurgical & Materials Engineering Department  
Indian Institute of Technology, Kharagpur, West Bengal

**Design Challenges and Technology Trends for Aircraft Engines**

*Dr. Asim Ghosal*
Consulting Engineer/Technologist  
GE Aviation, John F Welch Technology Center  
Bangalore, India

**Behaviour of bi-metallic & stainless steel straight pipes under cyclic fracture-experimental investigations on real size components**

*Dr G. Raghava*
Chief Scientist & Head, Fatigue & Fracture Laboratory  
CSIR – Structural Engineering Research Centre  
CSIR Campus, Taramani, CHENNAI, India

**Corrosion Fatigue Behaviour of Nitrogen Alloyed Austenitic Stainless Steels**

*Dr. U. Kamachi Mudali*
Outstanding Scientist &  
Associate Director - Corrosion Science and Technology Group  
Associate Director, Materials-Process and Equipment Development Group  
Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu, India

**In Chase of Durability - A Historical Perspective**

*Dr. Ramesh Chandwani*
Managing Director  
Zentech International, UK

**Realistic Fatigue Life Predictions based on computed SIF & Variable DOF approach**

*Dr. Omar Ibrahim*
Managing Director  
Process Optimization Corporation, USA

**Dr. R Sundar**
Director  
Bangalore Integrated Systems Solution [BISS], Bangalore
Call for Papers

**FatigueDurability India 2016** invites technical papers from all Academicians/individuals/companies associated with engineering design, analysis, testing, instrumentation, research on Fatigue Durability & Fracture Mechanics or related technologies.

The Authors are encouraged to submit paper on the following themes, but not limited to:

- **New Technologies in Fatigue, Durability & Fracture Mechanics**
- **Material & Fatigue**
- **Thermo-Mechanical & Creep Fatigue**
- **Instrumentation & Life Prediction**
- **Computational Techniques & Life Prediction**
- **Engineering Design & Life Prediction**
- **Reliability**
- **Fracture Mechanics**
- **Other & Research**

**Abstracts : before 30th June 2016 to** abstract@fatiguedurability.com  
**Papers : before 30th August 2016 to** papers@fatiguedurability.com

**Authors Registration : before 30th August 2016 to** authors@fatiguedurability.com

Exhibitors Profile

FatigueDurability India 2016, creates a platform for companies showcase breakthrough technologies and products in:

- Fatigue, Fracture Testing Machineries  
- Fatigue, Durability Instrumentation & Associated Technologies  
- Computational Software & Technologies  
- Material Testing Equipments, Machineries & Accessories  
- Data Acquisition and Processing Technologies  
- Fatigue, Durability, Fracture Research Centers  
- Fatigue, Durability, Fracture Training Centers  
- Design, Engineering Equipments and Associated Technologies  
- Material, Metallurgy, Life Perdition Technologies  
- Reliability Software and Associated Technologies  
- Fracture Prediction Equipments, Testing Instruments and Associated Technologies  
- Academic Research and Training Center  
- Engineering Services and Research Companies  
- Certification Agencies  
- Consulting Firms

**to list few, but not limited to.**

Interested can send mail to exhibition@fatiguedurability.com

**Contact**
Arun Karthik  
Exhibition Co-ordinator FatigueDurability India 2016  
exhibition@fatiguedurability.com +91 9900138009

www.2016.fatiguedurability.com
Institute of Structural Integrity and Failure Studies engages with the industry, academia and interested community in encouraging the knowledge sharing and news about advanced technology developments to make the engineering community actively participate in resolving the problems faced by industries and publishing the results to achieve competitive expertise in the global scene. ISIFS has a consortium of experts with decades of experience in solving the real time industrial – fatigue, fracture, failure problems associated with design, engineering, material, process related with insight of theoretical, analytical, experimental and computational simulation knowledge.

Institute of Structural Integrity and Failure Studies aims to promote, educate and encourage the research focusing on technologies associated with fatigue, fracture, failure, FEM, Life Assessment, Damage Mechanics, material modeling aspects and beyond covering design to life assessment and extension.

Institute of Structural Integrity and Failure Studies understand the timely need in bringing different expertise people together and create a platform for research and knowledge sharing. Consulting Wing of Institute of Structural Integrity & Failure Studies brings a consortium of experts to address the requirements of industry.

For more details Visit : www.fatiguedurability.com

Contact :
Dr. Raghunath Khare, Head - ISIFS, Materials & Failure Expert
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India Science Foundation

www.indiasciencefoundation.com

Indian Society of Systems for Science and Engineering (ISSE) is a professional body for interdisciplinary collaboration of systems science and engineering. ISSE is unique among the systems oriented institutions having the objective of bringing together scholars and practitioners from academic, business and R&D organizations for promoting the systems concept.

The society was started in 2010 at Vikram Sarabhai Space Centre (VSSC), with its Headquarters at Thiruvananthapuram. It is a holistic approach for sharing the available resources and experience to enrich the system knowledge. The Bangalore chapter-ISSE was inaugurated by Shri A.S. Kiran Kumar; Chairman-ISRO on 25th May 2015. Shri P. KunhiKrishnan, Director, SDSC-SHAR, ISRO is the National President of ISSE and Dr. M V N Prasad, LPSC is the ISSE Bengaluru Chapter President.

DHIO Research and Engineering Pvt Ltd., is a Collaborative Engineering Services and R&D Company based in Bangalore India.

DHIO has an experienced pool of experts, engineers and scientists with decades of domain experience and expertise in applying state of the art simulation technology to in advanced Computer Aided Engineering Design, Analysis, Life Estimation and Optimisation Knowledge. DHIO extends its support to Auto, Aero, Power Plant, Chemical Processing, Railways and General Engineering Companies to achieve complex engineering simulation needs in product/process/material design, redesign, engineering, reverse engineering, analysis and optimisation to save money, material & time.

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