

# Technical Programme for the Three – Day National Workshop on Fatigue, Fracture and Life Extension (FFLE-2014)

Organised by TR Anantharaman Education and Research Foundation, Hyderabad in Association with DMRL & RCMA (Materials) [CEMILAC], DRDO, Hyderabad  
At DRDO Auditorium, Lab Quarters, Kanchanbagh, Hyderabad, India [January 29-31, 2014]

## Day – 1 January 29, 2014 (Wednesday)

09:00	Registration	
10:00 – 13:00	Inaugural Session	
10:00	Welcome	Dr. Amol A. Gokhale, DMRL
10:10	About TRA-ERF & FFLE-2014	Dr. N Eswara Prasad, CEMILAC
10:20	Presidential Address & Release of Proceedings	Professor VV Kutumbarao, DMRL & Secretary, TRA-ERF
10:35 – 11:45	<b>Damage Tolerance: A Strategy Based on Multidisciplinary Sciences &amp; Technology</b> Professor B Datta Guru IISc., Bangalore	
11:45	Vote of Thanks	Dr. Vikas Kumar, DMRL
11:50	Workshop Photo	
12:00 – 13:00	Lunch	
13:00 – 15:00	<b>Technical Session – 1: Fundamentals of Fatigue and Fatigue Crack Growth (FCG)</b> Chair: Professor JL Strudel, France; Co-chair: Dr. Vikas Kumar, DMRL Rapportiers: Dr. Atul Kumar and Mr. CM Om Prakash, DMRL	
13:00 – 13:45	Introduction to Fatigue Deformation & Fracture	Professor K Bhanu Sankara Rao, MGIT
13:45 – 14:30	Engineering Application of Threshold Stress Intensity	Dr. R Sunder, BISS, Bangalore
14:30 – 15:00	Tea	
15:00 – 17:10	<b>Technical Session – 2: Fatigue and Fatigue Crack Growth of Engineering Materials</b> Chair: Professor P Rama Rao; Co-chair: Dr. R Sunder, BISS Rapportiers: Dr. Atul Kumar and Mr. CM Om Prakash, DMRL	
15:00 – 15:30	Fatigue & FCG of Al-Li Alloys	Prof. VV Kutumbarao, DMRL, Hyderabad
15:30 – 16:00	Low Cycle Fatigue Behaviour of Aeronautical Materials	Prof. Vakil Singh, IIT-BHU(MET), Varanasi
16:00 – 16:30	Low Cycle Fatigue Behaviour of Steels	Dr. R Sandhya, IGCAR, Kalpakkam
16:30 – 17:00	Fatigue Behaviour of Nano Composites	Dr. M. Manjunatha, NAL, Bangalore
17:00 – 17:10	Remarks by the Session Chairman	Professor P Rama Rao, ARCI, Hyderabad

## Day – 2: January 30, 2014 (Thursday)

09:30 – 13:00	<b>Technical Session – 3: Fracture &amp; Fracture Based Design</b> Chair: Professor B Datta Guru, IISc., Bangalore; Co-chair: Dr. Vikas Kumar Rapportiers: Dr. Atul Kumar and Mr. CM Om Prakash, DMRL	
09:30 – 10:15	LEFM & LEFM Based Design	Dr. N Narasaiah, NIT, Warangal
10:15 – 11:00	EPFM & Appln. to Alloy Development	Dr. M Srinivas, DMRL, Hyderabad
11:00 – 11:30	Tea	
11:30 – 12:00	Fracture Toughness Evaluation of Thin Films using Nano Indentation	Dr. Samir V Kamat, DMRL, Hyderabad
12:00 – 12:30	Application of Fracture Mechanics in Nuclear Reactor Design	Dr. G Shasi Kala, IGCAR, Kalpakkam
12:30 – 13:00	Non-Linear Fracture Mechanics in CFCCs	Dr. N Eswara Prasad, CEMILAC, Hyderabad
13:00 – 14:00	Lunch	
14:00 – 17:00	Experiments/Demos in Fatigue & FCGR LEFM & EPFM Fractography using SEM	Org.: Dr. Partha Ghosal, N Chitti Babu Jalaj Kumar and Kartik Prasad

## Day – 3: January 31, 2014 (Friday)

09:30 – 13:30	<b>Technical Session – 4: Damage Evaluation and Life Prediction</b> Chair: Dr. Amol A. Gokhale, DMRL, Hyderabad; Co-chair: Dr. M Srinivas Rapportiers: Dr. Atul Kumar and Mr. CM Om Prakash, DMRL	
09:30 – 10:30	Role of NDE in Structural Integrity of Aerial Platforms	Dr. T Jayakumar, IGCAR, Kalpakkam
10:30 – 11:30	Life Prediction Technologies for Aero-engine Components	Dr. Vikas Kumar, DMRL, Hyderabad
11:30 – 12:30	Life Monitoring of Aero-engine Components	Dr. BVA Patnaik, GTRE, Bangalore
12:30 -13:30	Lunch	
13:30 – 16:15	<b>Technical Session – 5: Life Extension Technologies</b> Chair: Dr. K Tamilmani, DS and DG (Aero), Bangalore; Co-chair: Dr. M Srinivas Rapportiers: Dr. Atul Kumar and Mr. CM Om Prakash, DMRL	
13:30 – 14:15	Life Assessment of Power Plant Compts.	Dr. Kulvir Singh, BHEL R&D, Hyderabad
14:15 – 15:00	Life Extension of Aero-Engines	Shri RK Satpathy, RCMA (CEMILAC), Koraput
15:00 – 15:45	Life Extension: An Airforce Experience	Gp. Cap. BVN Siva, IAF MC, Nagpur
15:45 – 16:15	Tea	
16:15 – 17:15	<b>Valedictory Session</b> Participants' Feed Back Remarks and Observations	
16:15 – 16:45		Org.: Dr. N Eswara Prasad, CEMILAC, Hyderabad
16:45 - 17:05		Dr. Amol A Gokhale, Director, DMRL, Hyderabad Professor VV Kutumbarao, DMRL, Hyderabad Professor B Datta Guru, IISc., Bangalore Dr. P Rama Rao, ARCI, Hyderabad Mr. Jalaj Kumar, DMRL, Hyderabad
17:05	Vote of Thanks	
17:10	Tea & Distribution of Certificates	