

# NDE-2019-Preconference Tutorial

## *Technical Program*

3<sup>rd</sup> December 2019

08:00 AM- Registration

09:00 AM- Inauguration

09:45 AM- High Tea

### PCT 1: THERMA IMAGING - INDUSTRIAL AND MEDICAL APPLICATIONS

Day	Time	Topic	Speaker
3/12	10:00	Overview of Infrared Thermography, Concepts of temperature, heat and Heat transfer Black body principles and law Contact and Noncontact Measurement	Dr. Shwetang Pandey, Institute of Plasma Research, Ahmedabad
3/12	11: 00	Infrared Sensing-Detectors, optics, scanning and Imaging Calibration of Equipment	Dr. Sharath, Ramaiah Institute of Technology, Bangalore
3/12	12: 00	Performance Parameters, Factors affecting the measurement	M.Menaka, Indira Gandhi Centre for Atomic Research, Kalpakkam
		<b>13:00- 14:00 hrs</b>	<b>LUNCH</b>
3/12	14:00	<b>Sponsors Demo/Talk</b>	
3/12	15:00	NDE- Testing Techniques	Dr. Ravi Babu, IIT -Ropar
		16:00-16:15 Tea Break	
3/12	16:15	Basics and Applications of Thermal Imaging in Aerospace Industry	Dr.Sreedhar Unnikrishna kurup, IIT (Madras)
		<b>DAY - 2</b>	
4/12	09:30	Condition Monitoring Applications of Infrared Thermography	Mr. Venkatraman, SpaceV Technologies
		<b>10: 30 -10: 45 hrs</b>	<b>TEA BREAK</b>
4/12	10:45	Overview of Medical Applications	Dr.Sriram, Ramaiah Institute of Technology, Bangalore MSRIT
4/12	11: 45	Biomedical Applications of Infrared Thermography	Dr. Sunitha, SRM , Chennai
4/12	12: 45	Applications of Thermography for Furnace Monitoring	Mr. Anand, ATOS, Bangalore
		<b>13:45- 14:45 hrs</b>	<b>LUNCH</b>
4/12	14:45	<b>Sponsors Demo/Talk</b>	
		<b>15:45 -16: 00 hrs</b>	<b>TEA BREAK</b>
4/12	16:00-16:30	Valedictory function	

**PCT 2: 3D X-RAY IMAGING-APPLICATIONS IN ADDITIVE  
MANUFACTURING, PROCESS QUALITY CONTROL AND METROLOGY**

Day	Time	Topic	Proposed Faculty
<b>DAY 1</b>			
3/12	10:00	X-Ray Sources and Detectors	Mr. V. Manoharan, GE Research Centre, Bangalore
3/12	11:00	Basics of CT, System and Reconstruction	Dr Debasish Mishra, GE Research Centre, Bangalore
3/12	12:00	Image Artefacts & Corrections	Dr Debasish Mishra, GE Research Centre, Bangalore
<b>13:00- 14:00 hrs LUNCH</b>			
3/12	14:00	CT Application - Metrology & NDE in Aerospace	Mr. M. Arumugam, LPSC, ISRO, Vallimala
3/12	15:00	CT Metrology - Advantages & Challenges	Mr. A. Tabrez/ Mr. Mahesh, TE Connectivity, Bangalore
<b>16:00-16:15 Tea Break</b>			
3/12	16:15	Computed Tomography for Defence Applications	Dr.M.Venkat Reddy, DRDO, Hyderabad
<b>DAY 2</b>			
4/12	09:30	CT Applications & Important in automotive industries	Dr. Narasimha Rao,TVS, Chennai
<b>10:30-10:45 Tea Break</b>			
4/12	10:45	CT Analysis Software-Introduction	Christy Joseph Konkara, Volume Graphics, Singapore
4/12	11: 45	Automatic Defect Recognition in 3D Imaging	Prof.Krishnan Balasubramanian, IIT Chennai
4/12	12: 45	Applications of CT in additive manufacturing	Mr.Samaresh Changdhar,BH, Mumbai
<b>13:45- 14:45 hrs LUNCH</b>			
4/12	14: 45	<b>Sponsors Demo/Talk</b>	
<b>15:45-16:00 Tea Break</b>			
4/12	16:00	All Presenters: Panel Discussion	

### PCT 3: NDE DURING AIRCRAFT MANUFACTURE AND IN-SERVICE

Day	Time	Topic	Faculty
<b>DAY 1</b>			
3/12	10:00	Role of NDE in Aircraft Manufacture & Service	Mr.Vijayaraghavan.P Senior Manager (Rtd ) HAL, Blore
3/12	11:00	UT of Aero Composites during production	Mr Chandran Kollam, Consultant TAML Blore
3/12	12:00	Airworthiness approval methodology for NDE of Aerospace components	Dr. Shirish Sharad Kale Scientist G & RD CEMILAC, DRDO, Bangalore
<b>13:00- 14:00 hrs</b>		<b>LUNCH</b>	
3/12	14:00	<b>Sponsors Demo/Talk</b>	
3/12	15:00	NDE during Aero Engine Manufacture and & Service	Mrs M.R. Vijayalakshmi, Scientist F & AD GTRE, DRDO, Bangalore
<b>16:00-16:15 Tea Break</b>			
4/12	16::15	In-situ NDT on Aircraft & Helicopters case studies	Mr.Vijayaraghavan.P Senior Manager (Rtd ) HAL
<b>DAY 2</b>			
4/12	9:30	NAS 410 & EN 4179 Certification & NADCAP	Mr. Mottito Togo Technology Specialist Honeywell Aerospace, Blore
<b>10:30-10:45 Tea break</b>			
4/12	10:45	Process Control calibration &Acc Std RT UT ET	Mr. Sharma
4/12	11:45	Process Control calibration &Acc Std PT MT	Mr. Misra, DGM (QA) FNF HAL Blore
4/12	12:45	CT scan of production composite parts & In situ by UT	Mr. Ramesh Babu G Senior Manager(QA) ACD HAL
<b>13:45- 14:45 hrs</b>		<b>LUNCH</b>	
2	14.45	<b>Sponsors Demo/Talk</b>	
<b>15:45- 16:00 Tea Break</b>			
2	16:00	Valedictory Function	
<b>16:45 - 17:00 hrs</b>		<b>TEA</b>	

## PCT4: NDE OF CIVIL STRUCTURES

Day	Time	Topic	Faculty
<b>DAY 1</b>			
3/12	10:00	Recent advances in NDE of concrete structures at BAM	Dr. Ernst Niederleithinger, BAM, Germany
3/12	11:00	Quality Control using NDT in the Construction Industry	Dr B. S. Sarma, L&T (Retd.)
3/12	12:00	Corrosion assessment of reinforced concrete structures	Dr S. Bhaskar, SERC, Chennai
<b>13:00- 14:00 hrs LUNCH</b>			
3/12	14:00	Current concrete NDT practices in India and case studies	Dr. Balasubramanian, CQC NDT, Chennai
3/12	15:00	Embedded Sensing for Structural Health Monitoring of Concrete Structures	Mr S.G.N.Murthy, SERC, Chennai
<b>16:00 - 16:15 hrs TEA BREAK</b>			
3/12	16:15	Emerging NDT inspection of Concrete by Digital Radiography	Samik Bhattacharyya & Mr Krishna Bhuta, Carestream Health India Pvt. Ltd.
3/12	17:15	Under water inspection of concrete structures	Tanuj Jhunjunwala, Planys, Chennai
<b>DAY 2</b>			
4/12	09:30	Basics and applications of GPR and Impact Echo techniques for testing of concrete structures	Dr. Govind Sharma, IGCAR, Kalpakkam
10:30-10:45 Tea Break			
4/12	10:45	Ultrasonic Inspection of Concrete Structures	Dr. A. Bulavinov, ACS-Solutions GmbH&CoKG
4/12	11: 45	Subsurface imaging as a tool for NDT of concrete	Prof. Abhijit Ganguli, IIT Tirupathi
4/12	12: 45	Thermography Inspection of Civil Structures	Dr M. Menaka, IGCAR, Kalpakkam
<b>13:45- 14:45 hrs LUNCH</b>			
2	14:45	NDE of foundations (pile integrity, ultrasonic methods, parallel seismic)	Dr. Ernst Niederleithinger, BAM, Germany
<b>15:45-16:00 Tea Break</b>			
2	16:00	NDE of Indian Heritage Structures	Dr N. Gopalakrishnan, CBRI, Roorkee
2	17:00	Recent developments in NDT instruments for applications in Civil Engineering	Mr Logesh Raj, Proceq
2	18:00	Panel Discussion	

