

**NDE 2021**  
DECEMBER 9-11, 2021

# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUTION**

**ORGANISED BY:**



## **CONFERENCE PROGRAM**

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# **NDE 2021**



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **INAUGURAL FUNCTION**

**THURSDAY, 9<sup>TH</sup> DECEMBER 2021 - 10:30 - 11:45 HRS**

**INAUGURAL FUNCTION LINK - <https://www.youtube.com/watch?v=QJSXQaqJZ5k>**

## **MEMORIAL TALKS**

**09<sup>TH</sup> DECEMBER 2021 - 12:15 -13:45 hrs**

|                             |  |   |  |   |
|-----------------------------|--|---|--|---|
| <b>Hall</b>                 | Hall A: BHABHA   |   |  |   |
| <b>Session Chairperson:</b> | Dr.B.Venkatraman, Director, Indira Gandhi Center for Atomic Research |   |  |   |
| <b>Time</b>                 |  | <b>Title of the talk</b>  | <b>Name of the Speaker</b>                             | <b>Organization</b>                     |
| 12:15-13:00                 | Mr Ramesh Bhai Parikh Memorial Talk                                  | Latest trends and applications of NDE for Aerospace & Defence Applications                          | Dr S K Jha, Chairman & Managing Director               | Mishra Dhatu Nigam (MIDHANI), Hyderabad |
| 13:00-13:45                 | Dr.Baldev Raj Memorial talk  | Dynamic Thermography Inspection of Structures using a Drone Based Approach: Review and Case studies | Prof. Xavier Maldague Sciences and Engineering faculty | University Laval, Canada                |

## **PLENARY SESSION: I**

**09<sup>TH</sup> DECEMBER 2021 - 14:00 -15:30 hrs**

|                             |  |   |                      |  |
|-----------------------------|--|---|----------------------|--|
| <b>Session Number</b>       | Plenary Session : 1  |   |                      |  |
| <b>Hall</b>                 | Hall A: BHABHA   |   |                      |  |
| <b>Session Chairperson:</b> | Dr. M.T. Shyamsunder                                       |   |                      |  |
| <b>Time</b>                 | <b>Title of the talk</b>                                   | <b>Name of the Speaker</b>                    | <b>Organization</b>  |  |
| 14:00-14:45                 | The three A's of Digital Inspection Solutions              | Ms.Arungalai Anbarasu, CTO & Strategy Officer | Waygate Technologies |  |
| 14:45-15:30                 | Industrial Internet of Things (IIoT) for Energy Transition | Dr. Chiraz Ennaceur, CEO and Co-founder       | CorrosionRADAR Ltd   |  |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## PHASE ARRAY UT/TFM

09<sup>TH</sup> DECEMBER 2021 - 15:45 -18:30 hrs

|                             |                     |  |                            |  |
|-----------------------------|---------------------|--|----------------------------|--|
| <b>Session Number</b>       | 1A                  |  |                            |  |
| <b>Hall</b>                 | Hall A: BHABHA      |  |                            |  |
| <b>Session Chairperson:</b> | Dr.R.J.Pardiker     |  |                            |  |
| <b>Keynote Speaker(s):</b>  | Dr.Anishkumar       |  |                            |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>   | <b>Name of the Speaker</b> | <b>Organization</b>  |
| 15:45-16:15                 | IT1                 | Multi-modal plane wave imaging based phased array ultrasonic technique for characterization of planar flaws  | Dr.Anishkumar              | Indira Gandhi Center for Atomic Research                     |
| 16:15-16:30                 | CP199               | Inspection of Solid Axles in the Rail Industry   | CORTI GIOVANNI             | Olympus Europa SE & Co. KG.,<br>Extende, Olympus Iberia      |
| 16:30-16:45                 | CP118               | Reliable Phased Array Ultrasonic Corrosion Measurement   | Krishna Bhuta              | Topax NDT Solutions  |
| 16:45-17:00                 | CP144               | Experimental Methodology to find defects in Explosive bonded weldments by using Phased array ultrasonic testing PAUT technique for Aerospace application | KAMESHGURU Kameshguru      | ISRO PROPULSION COMPLEX                                      |
| 17:00-17:15                 | CP156               | Development of a Portable Phased Array Ultrasonic Test Methodology for Nonuniform Thick Ablative Nozzle Liners Used in Launch Vehicles                   | SOGUNURU Hari Krishna      | VSSC   |
| 17:15-17:30                 | CP184               | Development of Enhanced Defect Characterization Method using Anisotropy Correction in the Ultrasonic Phased Array FMCTFM data                            | PONSEENIVASAN S            | HBNI   |
| 17:30-17:45                 | CP42                | Design And Development Of A Technique To Inspect The Curvature Of Composite Part With Flexible Phased Array Probe  | GOYAL ADARSH               | NIT, TIRUCHIRAPPALLI   |
| 17:45-18:00                 | CP63                | Construction and Simulation of a Novel Phased Array Borehole Probe for Ultrasonic Investigations at Sealing Structures in Radioactive Repositories       | PRABHAKARA prathik         | Bundesanstalt für<br>Materialforschung und -prüfung<br>(BAM) |
| 18:10-18:25                 | CP32                | Intermodal TFM with Applications to Weld Inspections   | RIOUX Philippe             |  |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## THERMOGRAPHY

09<sup>TH</sup> DECEMBER 2021 - 15:45 -18:15 hrs

|                             |                     |   |                            |   |
|-----------------------------|---------------------|---|----------------------------|---|
| <b>Session Number</b>       | 1B                  |   |                            |   |
| <b>Hall</b>                 | Hall B: KALAM       |   |                            |   |
| <b>Session Chairperson:</b> | Dr.Vanita Arora     |   |                            |   |
| <b>Keynote Speaker(s):</b>  | Dr.Geetika Dua      |   |                            |   |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>   |
| 15:45-16:15                 | IT2                 | Defect Detection Capabilities of Matched Filter Based Infrared Non-Destructive Testing and Evaluation   | Dr.Geetika Dua             | Thapar Institute of Engineering and Technology  |
| 16:15-16:30                 | CP181               | Vibrothermography for detection of damages in glass fibre reinforced polymer composite using forward and backward sweep local defect resonance excitation | BOSE Tanmoy                | NIT Meghalaya   |
| 16:30-16:45                 | CP154               | Detecting Delaminations in CFRP using Quadratic Frequency Modulated Thermal Wave Imaging  | BADUGU SURESH              | Koneru Lakshmaiah Education Foundation  |
| 16:45-16:55                 | CP170               | Detection and Estimation of Subsurface Defects using Frequency Modulated Thermal Wave Imaging   | KAUR Navpreet              | Thapar Institute of Engineering and Technology, Indian Institute of Technology, Ropar, Indian Institute of Technology, Delhi      |
| 16:55-17:05                 | CP171               | Thermal Nondestructive Testing and Evaluation for Characterization of Fibre Reinforced Polymer Materials  | KAUR Jasleen               | Thapar Institute of Engineering and Technology, Indian Institute of Technology Ropar, Indian Institute of Technology Delhi        |
| 17:05-17:20                 | CP194               | Biomaterial for Bone density diagnosis using Modulated thermal wave Imaging A numerical study   | SANCHITA DASS SANCHITA     | Medi-Caps University Indore, Centre for Sensors, Instrumentation and Cyber Physical System Engineering (SeNSE) Indian Institute o |
| 17:20-17:35                 | CP112               | Pulse Compression Favorable Linear Frequency Modulated Thermal Wave Imaging for the Diagnosis of Skin Lesions A Numerical Study                           | SHARMA ANSHUL              | INDIAN INSTITUTE OF TECHNOLOGY ROPAR, INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, UNA, INDIAN INSTITUTE OF TECHNOLOGY DELHI       |
| 17:35-17:45                 | CP152               | Golay Coded Thermal Wave Imaging for NonDestructive Testing and Evaluation of Steel Sample  | MISHRA PRIYANKA            | INDIAN INSTITUTE OF INFORMATION TECHNOLOGY UNA, Indian Institute of Technology Ropar  |
| 17:45-18:00                 | CP97                | Analysis of Ballistic Impacts on Composite Materials by Infrared Active Thermography  | BOUBANGA TOMBET STEPHANE   | Telops  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUTION**

## **TOMOGRAPHY X-RAY & OPTICAL**

**09<sup>TH</sup> DECEMBER 2021 - 15:45 -18:30 hrs**

|                             |                     |   |                                     |  |
|-----------------------------|---------------------|---|-------------------------------------|--|
| <b>Session Number</b>       | 1C                  |   |                                     |  |
| <b>Hall</b>                 | Hall C: RAMAN       |   |                                     |  |
| <b>Session Chairperson:</b> | Dr.Umeshkumar       |   |                                     |  |
| <b>Keynote Speaker(s):</b>  | Dr.Debasish Mishra  |   |                                     |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b>          | <b>Organization</b>  |
| 15:45 - 16:15               | IT3                 | Manufacturing   | Dr.Debasish Mishra                  | GE Research  |
| 16:15-16:25                 | SP7                 | High Energy Computed Tomography   | Mr.Vijay Alreja, Mr.Steve Halliwell | VJ Technologies  |
| 16:25 - 16:40               | CP77                | Optical Coherence Tomography for NDT of Flexible Package Seals                        | WONG Zheng Zheng                    | ARTC   |
| 16:40 - 16:55               | CP135               | Spatial Resolution Evaluation Study of CT System for Dimensional Accuracy Measurement | RAMAR R                             | Safety, Quality and Resource Management Group,Indira Gandhi Centre for Atomic Energy, Safety, Quality and Resource Management Group,Indira Gandhi Centre For Atomic Research, Kalpakkam-60 |
| 16:55 - 17:10               | CP92                | Optimized Detection of Critical Defects in 3D Printed Components Using CT             | BLIEDTNER Katharina                 | VisiConsult X-ray Systems & Solutions GmbH   |
| 17:10 - 17:25               | CP136               | CT Image Reconstruction Of Cubical Blocks By Image Fusion Approaches                  | ARUNMUTHU krishnan                  | Indira Gandhi Centre for Atomic Research   |
| 17:25 - 17:40               | CP80                | Latest developments in industrial Computed Tomography CT                              | DR. BLUME Jennifer                  | YXLON International GmbH   |
| 17:40 - 17:55               | CP90                | Iterative Tomography Reconstruction Using GPU for Industrial Application              | LAKSHMINARAYANA Y                   | BARC   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **ELECTROMAGNETIC NDE-EDDY CURRENT & MICROWAVE**

**09<sup>TH</sup> DECEMBER 2021 - 15:45 -18:30 hrs**

|                             |                            |  |                                       |   |
|-----------------------------|----------------------------|--|---------------------------------------|---|
| <b>Session Number</b>       | 1D                         |  |                                       |   |
| <b>Hall</b>                 | Hall D: FARADAY            |  |                                       |   |
| <b>Session Chairperson:</b> | Dr. Sarmishtha Palit Sagar |  |                                       |   |
| <b>Keynote Speaker(s):</b>  | Prof. Prabhat Munshi       |  |                                       |   |
| <b>Time</b>                 | <b>Abstract No.</b>        | <b>Title of the talk</b>   | <b>Name of the Speaker</b>            | <b>Organization</b>   |
| 15:45 - 16:15               | IT4                        | Microwave Nondestructive Testing and Imaging of Hidden Objects   | Prof. Prabhat Munshi                  | IIT, Kanpur   |
| 16:15 - 16:25               | SP1                        | Pulsed Eddy Currents: Improvements In Overcoming Adverse Effects of Galvanized Steel Weather Jacket  | Gabriel CYR                           | Eddyfi Technologies   |
| 16:25 - 16:40               | CP147                      | Microwave NDE of Conformal Objects   | KIZHEKKE PAKKATHILLAM JAYARAM         | Amrita School of Engineering, Amrita Vishwa Vidyapeetham, Chennai, IIT Madras |
| 16:40 - 16:55               | CP159                      | ADOPTING MICROWAVE TECHNIQUE FOR EVALUATION OF MOISTURE CONTENT IN THE TRANSFORMER OIL FOR CONDITION MONITORING OF TRANSFORMER               | SHUFALI ASHRAF WANI<br>Shufali Ashraf | IIT Madras  |
| 16:55 - 17:10               | CP153                      | Effect of material property and tube geometry in optimizing the operating point and frequency in remote field eddy current technique         | THULASI vijayachandrika               | HomiBhabha National Institute, Indira Gandhi Centre For Atomic Research       |
| 17:10 - 17:25               | CP198                      | Eddy Current Inspection for Stainless Steel Welds  | GEDDAM PRASANTH                       | Olympus   |
| 17:25 - 17:40               | CP206                      | Evaluation Of Induction Hardened CaseDepth Through Sweep Frequency Eddy Current Technique  | R Arjun A.                            | Indira Gandhi Center for Atomic Research Kalpakkam                            |
| 17:40 - 17:55               | CP213                      | Development Of A Multiple Segmented Coil Eddy Current Probe For Improved Inspection Of Thin Walled Small Diameter Tubes                      | BALAKRISHNAN SASI                     | INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH                                      |
| 17:55 - 18:10               | CP119                      | Experimental study of time frequency analysis of pulsed eddy current signals for creep measurement sensor for application in metallic medium | SHYAM T. V.                           | Bhabha Atomic Research Centre, HBNI   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **NDE APPLICATIONS IN O&G INDUSTRY**

**09<sup>TH</sup> DECEMBER 2021 - 15:45 -18:30 hrs**

|                             |                     |   |   |   |
|-----------------------------|---------------------|---|---|---|
| <b>Session Number</b>       | 1E                  |   |   |   |
| <b>Hall</b>                 | Hall E: MAXWELL     |   |   |   |
| <b>Session Chairperson:</b> | Dr.Prafull Sharma   |   |   |   |
| <b>Keynote Speaker(s):</b>  | Mr.Umakanthan Anand |   |   |   |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b>                | <b>Organization</b>   |
| 15: 45 - 16:15              | IT5                 | NDE in Refining and Petrochemicals - Challenges in the years to come  | Mr.Umakanthan Anand                       | Reliance Industries Limited                                       |
| 16: 15 - 16:25              | SP2                 | In-Service Weld Inspection Using Robotically Deployed ACFM  | Duncan MURRAY                             | Eddyfi Technologies   |
| 16: 25 - 16:40              | CP68                | Estimation of velocity profile of fluid influx/efflux and crack geometry while drilling oil and gas boreholes using short pulse length Doppler ultrasound | INDIMATH Shivanandan                      | Norwegian University of Science and Technology                    |
| 16: 40 - 16:55              | CP66                | Failure Analysis of Membrane Tubes for Waste Heat Recovery WHR Boiler in Sulphuric Acid PlantSAP  | PRADHAN SANTOSH KUMAR                     | Indian Farmers Fertiliser Cooperative Limited                     |
| 16: 55 - 17:10              | CP134               | Internal Rotary Inspection System For The Inspection Of The Mild Steel Pipelines  | MOINAK BANERJEE Moinak                    | Solinas Integrity Pvt Ltd   |
| 17:10- 17:25                | CP216               | Feasibility Study on application of ultrasonic Guided wave technique for integrity test of buried pipeline  | SANGEETHA D N                             | IGCAR   |
| 17:25- 17:40                | CP21                | Magnetic Flux Leakage Technique for Above Ground Storage Tank API 653 based Inspection and Pipeline Corrosion detection                                   | WAGH PRASHANT                             | Institute of Nondestructive Testing & Training, website indtt.org |
| 17:40- 17:55                | CP151               | An Algorithm for Detecting Leaks in a Pressurized Pipeline using Data from Acoustic Sensors   | SOLANKI Harsh                             | Solinas Integrity Pvt Ltd   |
| 17:55- 18:10                | CP15                | Case Study on Inspection of Bimetallic Tubes in Vertical Heat Exchanger Effective Ultrasonic Thickness  | NISHANK Soni                              | Reliance Industries limited                                       |
| 18:10- 18:25                | CP50                | Measurement Technique Optimize Oil and Gas Assets Integrity and Safety  | MARY AMALORPAM<br>CHELLATHURAI JEYASEKHAR | PROWESS UNIVERSITY  |
| 18:25- 18:40                | CP49                | Effective Direct Visual Inspection Technique Optimize Oil and Gas Assets Integrity and Safety   | MARY AMALORPAM<br>CHELLATHURAI JEYASEKHAR | PROWESS UNIVERSITY  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **PLENARY SESSION: II**

**10<sup>TH</sup> DECEMBER 2021 - 09:00 -10:30 hrs**

|                             |  |  |  |
|-----------------------------|--|--|--|
| <b>Session Number</b>       | Plenary Session : II                                     |  |  |
| <b>Hall</b>                 | Hall A: BHABHA   |  |  |
| <b>Session Chairperson:</b> | Prof. Prabhat Munshi                                     |  |  |
| <b>Time</b>                 | <b>Title of the talk</b>                                 | <b>Name of the Speaker</b>                         | <b>Organization</b>                    |
| 09:00-09:45                 | NDE at its Extreme - Applications for Space Explorations | Dr.Shant Kenderian, Director                       | The Aerospace Corporation              |
| 09:45-10:30                 | My Journey of Innovations in Guided Ultrasonic Wave      | Prof Krishnan Balasubramanian, Institute Professor | Indian Institute of Technology, Madras |

## **ELECTROMAGNETIC NDE**

**10<sup>TH</sup> DECEMBER 2021 - 10:45 -12:15 hrs**

|                             |                            |   |                            |  |
|-----------------------------|----------------------------|---|----------------------------|--|
| <b>Session Number</b>       | 2A                         |   |                            |  |
| <b>Hall</b>                 | Hall A: BHABHA             |   |                            |  |
| <b>Session Chairperson:</b> | Dr.Jyotirmayee Dash        |   |                            |  |
| <b>Keynote Speaker(s):</b>  | Dr. Aparna C. Sheila Vadde |   |                            |  |
| <b>Time</b>                 | <b>Abstract No.</b>        | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>                      |
| 10:45-11:15                 | IT6                        | Inspection of Composites and Sandwich Structures using Microwaves   | Dr. Aparna C. Sheila Vadde | GE Research                              |
| 11:15-11:30                 | CP86                       | Feature based sizing of defects from remote field eddy current signals using machine learning techniques  | MARADANA JAGADEESWARA RAO  | NIT Tiruchirapalli, IGCAR, kalpakkam     |
| 11:30-11:45                 | CP87                       | Eddy Current Technique for Measurement of Gap between Calandria Tube and Poison Injection Unit Tubes of Indian Pressurized Heavy Water Reactors | BAPAT HARSH MADHUKAR       | BHABHA ATOMIC RESEARCH CENTRE            |
| 11:45-12:00                 | CP100                      | Magnetic Force Induced Vibration Evaluation MFIVE an electromagnetic nondestructive method for the evaluation of reinforced concrete            | CHADY Tomasz               | West Pomeranian University of Technology |
| 12:00-12:15                 | CP52                       | HighSpeed Eddy Current Array Technology for NDE 40  | CHRISTOPHER LANE           | Olympus                                  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUTION**

## **ADVANCED ULTRASONIC NDE-METAMATERIALS**

**10<sup>TH</sup> DECEMBER 2021 - 10:45 -12:45 hrs**

|                             |  |   |                            |   |
|-----------------------------|--|---|----------------------------|---|
| <b>Session Number</b>       | 2B   |   |                            |   |
| <b>Hall</b>                 | Hall B: KALAM                                  |   |                            |   |
| <b>Session Chairperson:</b> | Dr.Paritosh Nanekar                            |   |                            |   |
| <b>Keynote Speaker(s):</b>  | Dr. C.V. Krishnamurthy, Prof. Prabhu Rajagopal |   |                            |   |
| <b>Time</b>                 | <b>Abstract No.</b>                            | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>                           |
| 10:45-11:15                 | IT7  | Metamaterials for NDE   | Dr. C.V. Krishnamurthy     | IIT, Madras                                   |
| 11:15-11:45                 | IT8  | Review of recent developments in acoustic and elastic wave (ultrasonic) metamaterials                           | Prof. Prabhu Rajagopal     | IIT, Madras                                   |
| 11:45-11:55                 | CP186  | Shape Optimization for the Design of Linear and Nonlinear Metamaterials to Improve Nonlinear Ultrasonic Testing | GHODAKE Pravinkumar        | Indian Institute of Technology Bombay, India. |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **THERMOGRAPHY**

**10<sup>TH</sup> DECEMBER 2021 - 10:45 -12:45 hrs**

|                             |                     |   |                            |  |
|-----------------------------|---------------------|---|----------------------------|--|
| <b>Session Number</b>       | 2C                  |   |                            |  |
| <b>Hall</b>                 | Hall C: RAMAN       |   |                            |  |
| <b>Session Chairperson:</b> | Mrs. M.Menaka       |   |                            |  |
| <b>Keynote Speaker(s):</b>  | Dr.Vanita Arora     |   |                            |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>  |
| 10:45-11:15                 | IT9                 | Recent trends in thermal non destructive testing and evaluation for inspection of fiber reinforced polymers | Dr.Vanita Arora            | IIT Una  |
| 11:15-11:30                 | CP109               | Characterization of Defects in Composite Plates Using Step Heating Thermography                             | D Sharath                  | M S Ramaiah Institute of Technology  |
| 11:30 - 11:40               | CP45                | Indigenous Development Of Thermographic NDT System With Variable Excitation Modes                           | NJALIYIL Jeevan Philip     | Vashishtha Research, Trivandrum, India   |
| 11:40 - 11:50               | CP96                | Barker Coded Thermal Wave Imaging for Defect Detection of Carbon Fiber Reinforced Polymer                   | RANI ANJU                  | Indian Institute of Technonlogy Ropar, Thapar University, Indian Institute of Technonlogy Delhi                              |
| 11:50 - 12:00               | CP217               | Subsurface Defects Detection using Pulse Compression Favorable Thermal Wave Imaging Modalities              | SINGH SIDDHIKA             | INDIAN INSTITUTE OF TECHNOLOGY, DELHI  |
| 12:00 - 12:15               | CP95                | Digitized Frequency Modulated Thermal Wave Imaging for Defect Estimation in Steel Sample                    | RANI ANJU                  | Indian Institute of Technonlogy Ropar, Indian Institute of Information Technology Una, Indian Institute of Technonlogy Delhi |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **RADIOGRAPHY**

**10<sup>TH</sup> DECEMBER 2021 - 10:45 -12:45 hrs**

|                             |                     |   |   |  |
|-----------------------------|---------------------|---|---|--|
| <b>Session Number</b>       | 2D                  |   |   |  |
| <b>Hall</b>                 | Hall D: FARADAY     |   |   |  |
| <b>Session Chairperson:</b> | Dr.Debasish Mishra  |   |   |  |
| <b>Keynote Speaker(s):</b>  | Dr.Umeshkumar       |   |   |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b>                        | <b>Organization</b>                              |
| 10:45-11:15                 | IT10                | Integrated Training and Certification in industrial Radiography Testing and Radiation Safety at BARC - genesis and present status | Dr.Umeshkumar                                     | BARC   |
| 11:15-11:30                 | CP139               | Significance of Nondestructive evaluation on the qualification of Pyrodevices in Satellite applications                           | REMAKANTHAN S<br>REMAKANTHAN<br>SASIDHARAN PILLAI | VIKRAM SARABHAI SPACE CENTRE,ISRO                |
| 11:30 - 11:45               | CP18                | Effect of Lead Screens on the Image Quality in Image Plate Based Computed Radiography   | S SRIVATHSAN                                      | BHABHA ATOMIC RESEARCH CENTRE                    |
| 11:45-11:55                 | CP36                | Automated Masking System for Digital Radiographic Inspection  | SURANIA DEEPANSHU                                 | National Institute of Technology Tiruchirappalli |
| 11:55-12:10                 | CP5                 | Noise removal in CCD images in DT based Neutron Radiography using edge preserving filters   | NAMBOODIRI GIRISH N                               | VIKRAM SARABHAI SPACE CENTRE                     |
| 12:10-12:20                 | CP55                | Implementation of Digital Radiography Computed radiography  | GVV ASHOK ASHOK VV<br>GUMMADI                     | LARSEN&TOUBRO LIMITED                            |
| 12:20-12:30                 | CP208               | Radiography examination of annular joints in inner duct of ALIP using special tool arrangement                                    | AZHAGESAN P                                       | IGCAR  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **NDE REGULATION, CODES AND STANDARDS**

**10<sup>TH</sup> DECEMBER 2021 - 10:45 -12:45 hrs**

|                             |                     |   |                                |  |
|-----------------------------|---------------------|---|--------------------------------|--|
| <b>Session Number</b>       | 2E                  |   |                                |  |
| <b>Hall</b>                 | Hall E:             |   |                                |  |
| <b>Session Chairperson:</b> | Diwakar Joshi       |   |                                |  |
| <b>Keynote Speaker(s):</b>  | Dr. A.U. Sonawane   |   |                                |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b>     | <b>Organization</b>                        |
| 10:45-11:15                 | IT11                | Regulatory surveillance over ionising radiation sources used in NDE applications during COVID-19 pandemic in India" | Dr. A.U. Sonawane              | AERB                                       |
| 11:15-11:30                 | CP124               | ASME Code Section V Edition 2021 Changes  | MUNGEL Surendra Anna           | Insight Quality Services                   |
| 11:30-11:40                 | CP128               | Online Audits ASME NDE Area   | BHAGWAT Aditya Vijay           | Insight Quality Services, Head, Operations |
| 11:40-11:50                 | CP24                | NDT Procedure Qualification   | PATOLE ONKAR                   | Aker Powergas Subsea Pvt. Ltd.             |
| 11:50-12:05                 | CP25                | Neuroeconomics Cognitive Biases NDT   | GUPTA SANTOSH                  | ICO INTERNATIONAL GROUP                    |
| 12:05-12:20                 | CP120               | Quality Process Digitisation  | ANANTHANARAYANA N Rajan        | TIC Services                               |
| 12:20-12:35                 | CP148               | Enriching Quality Control and Quality Assurance in NDT through NABL Accreditation                                   | ARUN KUMAR DIXIT<br>ARUN KUMAR | ARDC,HAL                                   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUTION**

## Special Session on **NDE IN AEROSPACE INDUSTRY AND NADCAP**

**10<sup>TH</sup> DECEMBER 2021 - 11:00 -13:00 hrs**

|                             |  |                            |                                    |
|-----------------------------|--|----------------------------|------------------------------------|
| <b>Session Chairperson:</b> | Vijayaraghavan. P  |                            |                                    |
| <b>Time</b>                 | <b>Title of the talk</b>                                 | <b>Name of the Speaker</b> | <b>Designation</b>                 |
| 11.00 - 11.10               | Overview of Aero NDT                                     | Vijayaraghavan.P           | Senior Manager (rtd) HAL Bangalore |
| 11.10- 11.40                | Providing NDT services To Aerospace Industry             | Abinash Behera             | MD Abinash Engineering Services    |
| 11.40 - 12.10               | NDT in MRO US & India                                    | William Flynn              | CEO, Syngineering NDT LLC USA      |
| 12.10- 12.40                | NDE of Aero Composites Present scenario and future trend | Chandran Kollon            | Chief Manager (rtd) HAL            |
| 12.40- 13.00                | NADCAP Accreditation                                     | Vijayaraghavan. P          | Senior Manager (rtd) HAL           |

## Special Session on **NDE STARTUP SHOWCASE**

**10<sup>TH</sup> DECEMBER 2021 - 15:00 -17:00 hrs**

|                             |  |                            |                    |
|-----------------------------|--|----------------------------|--------------------|
| <b>Session Chairperson:</b> | Prof. Prabhu Rajagopal   |                            |                    |
| <b>Time</b>                 | <b>Title of the talk</b>   | <b>Name of the Speaker</b> | <b>Designation</b> |
| 15:00                       | Introduction   | Prabhu Rajagopal           | IIT Madras         |
| 15:05                       | NDT Sensors  | Nishal Ramdas              | Azeriri            |
| 15:15                       | Annular Tank Inspections   | Rajeshwara Reddy           | Dhvani             |
| 15:25                       | Enhancing industrial asset management and productivity through artificial intelligence | Renjith P                  | Detect             |
| 15:35                       | Pipeline Corrosion assessment  | Prafull Sharma             | CorrosionRadar     |
| 15:45                       | Marine Asset Inspections and Management  | Tanuj Jhunjhunwala         | Planys             |
| 15:55                       | Piping and Tankage inspections   | Divanshu Kumar             | Solinas            |
| 16:05                       | Firmware for Robotic NDE   | Aranu Garriga-Casanova     | Sonobotic          |
| 16:15                       | Terahertz NDE Solutions  | Balasubrahmanyam Pesala    | Terasense          |
| 16:25                       | Waveguide Sensors for multi-point temperature measurement                              | Nishanth Raja              | Xyma               |
| 16:35 - 17:00               | Q&A  | Audience and All speakers  | All Speakers       |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **THERMOGRAPHY**

**10<sup>TH</sup> DECEMBER 2021 - 13:45-15:45 hrs**

|                             |                     |   |                            |  |
|-----------------------------|---------------------|---|----------------------------|--|
| <b>Session Number</b>       | 3A                  |   |                            |  |
| <b>Hall</b>                 | Hall A: BHABHA      |   |                            |  |
| <b>Session Chairperson:</b> | Dr.Geetika Dua      |   |                            |  |
| <b>Keynote Speaker(s):</b>  | Mrs.M.Menaka        |   |                            |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>  |
| 13:45-14:15                 | IT12                | Thermal Imaging for Corrosion Evaluation  | Mrs.M.Menaka               | IGCAR  |
| 14:15-14:30                 | CP114               | Application of Digitized Frequency Modulated Thermal Wave Imaging for Breast Cancer Detection A Numerical Study   | SHARMA ANSHUL              | INDIAN INSTITUTE OF TECHNOLOGY ROPAR, INDIAN INSTITUTE OF INFORMATION TECHNOLOGY UNA, THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY PATIALA, INDIAN INSTITUTE OF TECHNOLOGY DELHI                         |
| 14:30-14:45                 | CP129               | On The Selection of Hyperparameters for Automatic Defect Detection in Quadratic Frequency Modulated Thermal Wave Imaging using Anomaly Detection Models | G. T Vesala                | Infrared Imaging Center, Department of ECE, Koneru Lakshmaiah Educational Foundation, Vaddeswaram, A, Department of Mechanical Engineering, Koneru Lakshmaiah Educational Foundation, Vaddeswaram, A.P, In |
| 14:45-14:55                 | CP133               | Experimental Analysis of Digitized Frequency Modulated Thermal Wave Imaging for NonDestructive Testing and Evaluation of Materials                      | KAUR JASLEEN               | Indian Institute of Technology Ropar, Indian Institute of Technology Delhi   |
| 14:55-15:05                 | CP132               | Comparative Analysis of Infrared Thermographic Techniques for NonDestructive Testing and Evaluation of Materials  | MISHRA PRIYANKA            | Indian Institute of Technology Ropar, Indian Institute of Technology Delhi   |
| 15:05-15:15                 | CP145               | Inspection of Subsurface Defects using Linear Frequency Modulated Thermal Wave Imaging  | RANI ANJU                  | Indian Institute of Technology Ropar, Indian Institute of Technology Delhi   |
| 15:15-15:30                 | CP33                | COMPARATIVE STUDY OF PROBABILITY OF DETECTION IN GLASS COMPOSITES USING PULSE COMPRESSION FAVORABLE FREQUENCY MODULATED THERMAL WAVE IMAGING            | VANSHA KHER<br>Vansha      | New Horizon College of Engineering, IIT Delhi  |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## ULTRASOUND

**10<sup>TH</sup> DECEMBER 2021 - 13:45-15:45 hrs**

|                             |                       |   |                            |   |
|-----------------------------|-----------------------|---|----------------------------|---|
| <b>Session Number</b>       | 3B                    |   |                            |   |
| <b>Hall</b>                 | Hall B: KALAM         |   |                            |   |
| <b>Session Chairperson:</b> | Dr.CV Krishnamurthy   |   |                            |   |
| <b>Keynote Speaker(s):</b>  | Prof.S.Gopalakrishnan |   |                            |   |
| <b>Time</b>                 | <b>Abstract No.</b>   | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>   |
| 13:45-14:15                 | IT13                  | Ultrasonic inspection of Additively Manufactured components   | Prof.S.Gopalakrishnan      | IISC  |
| 14:15-14:30                 | CP123                 | Ultrasonic Wave Propagation and Dispersion Analysis in CFRP Laminated Composite Plate Structures                        | CHARATI Omkar              | Vellore Institute of Technology   |
| 14:30-14:45                 | CP141                 | Detection of Flaw in FRPConcrete Composite System using Nonlinear Ultrasonic Wave Propagation Characteristics           | G. T Vesala                | CSIR-SERC (Post Graduate Student), Academy of Scientific and Innovative Research (AcSIR), CSIR_SERC, University of Arizona  |
| 14:45-14:55                 | CP158                 | Multi Point Multi Parameters Measurement Through Ultrasonic Guided Waves  | DIXIT SWATANTRA            | National Institute of Technology Tiruchirappalli, Post Graduate from National Institute of Technology Tiruchrappalli, Professor in National Institute of Technology Tiruchrappalli, Post Doctorate from Indian Institute of Technology Madras |
| 14:55-15:10                 | CP110                 | Sensitivity studies of Air Coupled Ultrasonic Testing ACUT on Glass Fiber Reinforced Plastics GFRP Composites           | JAGTAP SWAPNIL ANANT       | NIT TRICHY, AZERIRI PVT LTD   |
| 15:10-15:25                 | CP165                 | Machine Learning Based Approach for Strength Assessment Cement Concrete Through NonDestructive Evaluation               | LUKESH PARIDA LUKESH       | SNU   |
| 15:25-15:40                 | CP189                 | Strength Evaluation and Prediction of Cement Concrete by Deep Learning Classification using NonDestructive Test Results | PARIDA LUKESH              | SNU   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **NDE 4.0**

**10<sup>TH</sup> DECEMBER 2021 - 13:45-15:45 hrs**

|                             |  |  |                            |                     |
|-----------------------------|--|--|----------------------------|---------------------|
| <b>Session Number</b>       | 3C   |  |                            |                     |
| <b>Hall</b>                 | Hall C: RAMAN  |  |                            |                     |
| <b>Session Chairperson:</b> | Dr.M.T. Shyamsunder  |  |                            |                     |
| <b>Keynote Speaker(s):</b>  | Dr.likka Virkkunen,Dr. Johannes Vrana,Lennart Schulenburg ,Christian Els |  |                            |                     |
| <b>Time</b>                 | <b>Abstract No.</b>  | <b>Title of the talk</b>   | <b>Name of the Speaker</b> | <b>Organization</b> |
| 13:45-14:15                 | IT14   | Machine learning for NDE - revolution without disruption   | Dr.likka Virkkunen         | TrueFlaw            |
| 14:15-14:45                 | IT15   | The World of NDE 4.0: Let the Journey Begin  | Dr. Johannes Vrana         | Vrana GmbH          |
| 14:45-15:15                 | IT16   | How to thrive in times of digital disruption   | Jason Robbins              | VisiConsult         |
| 15:15-15:45                 | T17  | AI in NDE - what it is today and what it can become in the future. A snapshot from years of experience in the intersection of both worlds. | Christian Els              | Sentin GmbH         |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## STRUCTURAL HEALTH MONITORING/INTEGRITY

**10<sup>TH</sup> DECEMBER 2021 - 13:45-15:55 hrs**

|                             |   |   |                            |   |
|-----------------------------|---|---|----------------------------|---|
| <b>Session Number</b>       | 3D  |   |                            |   |
| <b>Hall</b>                 | Hall D: FARADAY                                 |   |                            |   |
| <b>Session Chairperson:</b> | Dr. Ravibabu Mulaveesala                        |   |                            |   |
| <b>Keynote Speaker(s):</b>  | Dr.Christian boller, Dr. Sarmishtha Palit Sagar |   |                            |   |
| <b>Time</b>                 | <b>Abstract No.</b>                             | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>   |
| 13:45-14:15                 | IT18  | Life Cycle Management of Engineering Structures and the Role of NDE                               | Dr.Christian boller        | Saarland University   |
| 14:15-14:45                 | IT19  | Assessment of Structural Health Exposed to High Temperature in Real Time: An Approach             | Dr. Sarmishtha Palit Sagar | NML   |
| 14:45-14:55                 | CP121   | SHM of Critical Entities Using Ultrasonic Guided Waves  | KUMAR HITESH               | NATIONAL INSTITUTE OF TECHNOLOGY ,TIRUCHIRAPPALLI, XYMA ANALYTICS PVT. LTD. ,CHENNAI ,INDIA, XYMA ANALYTICS PVT LTD, CHENNAI ,INDIA |
| 14:55-15:10                 | CP188   | Structural Health Monitoring SHM of Bolted Joints in Launch Vehicle Components                    | SWAIN DIGENDRANATH         | Vikram Sarabhai Space Center  |
| 15:10-15:25                 | CP83  | Structural Health Assessment of a Masonry Bridge using Wireless Sensors A Case Study              | POLEPALLY GOVARDHAN        | Mahindra University   |
| 15:25-15:40                 | CP84  | Structural Assessment of a minor twin culvert bridge for early Structural Cracks and Retrofitting | NERIDU SAIRAM              | Mahindra University   |
| 15:40-15:55                 | CP69  | Advanced NDE Tools for Health Life Assessment of Critical Power Plant Components                  | DAS ANIL KUMAR             | NTPC-NETRA  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **NDE OF CIVIL STRUCTURES**

**10<sup>TH</sup> DECEMBER 2021 - 13:45-15:45 hrs**

|                             |                         |   |                            |   |
|-----------------------------|-------------------------|---|----------------------------|---|
| <b>Session Number</b>       | 3E                      |   |                            |   |
| <b>Hall</b>                 | Hall E: MAXWELL         |   |                            |   |
| <b>Session Chairperson:</b> | Mrs.M.R. Vijaya Lakshmi |   |                            |   |
| <b>Keynote Speaker(s):</b>  |                         |   |                            |   |
| <b>Time</b>                 | <b>Abstract No.</b>     | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>   |
| 13:45-14:00                 | CP231                   | Imaging of internal delaminations in Concrete using Radar waves and Ultrasonic Tomography   | KUCHIPUDI Sai Teja         | CSIR- Central Building Research Institute, Senior Scientist, CSIR- Central Building Research Institute, Scientist, CSIR- Central Building Research Institute  |
| 14:00-14:15                 | CP67                    | Remotely Operated Robotic Drones for Inspection of Submerged Concrete Structures  | KRISHNARAJ Kodoth          | Planys Technologies Pvt. Ltd., Indian Institute of Technology, Madras   |
| 14:15-14:30                 | CP157                   | NonDestructive Evaluation of Prestressed Concrete Bridges using System Identification Techniques                                    | SEETHALAKSHMI B. R.        | CSIR-Structural Engineering Research Centre   |
| 14:30-14:45                 | CP82                    | Condition Assessment and Numerical Modeling of ThirtyYearOld Residential Structure with Proposed Rehabilitation Scheme A Case Study | KATAM RAKESH               | Mahindra University   |
| 14:45-14:55                 | CP187                   | Region Based Ultrasonic Plane Wave Imaging In Concrete for Defect Characterization  | REYAZ Suhaib UI            | Indian Institute of Technology Jammy  |
| 14:55-15:10                 | CP233                   | Nondestructive Detection of Internal defects in Masonry Structures using Ground Penetrating Radar                                   | KORLAKUNTA Sai Chaitanya   | Vellore Institute of Technology, Vellore, CSIR- Central Building Research Institute, Senior Scientist, CSIR- Central Building Research Institute, Scientist, CSIR-Central Building Research Institute |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **ULTRASONIC NDE**

**10<sup>TH</sup> DECEMBER 2021 - 16:00-18:15 hrs**

|                             |                     |  |                                  |  |
|-----------------------------|---------------------|--|----------------------------------|--|
| <b>Session Number</b>       | 4A                  |  |                                  |  |
| <b>Hall</b>                 | Hall A: BHABHA      |  |                                  |  |
| <b>Session Chairperson:</b> | Dr.Anishkumar       |  |                                  |  |
| <b>Keynote Speaker(s):</b>  | Dr.R.J.Pardikar     |  |                                  |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>   | <b>Name of the Speaker</b>       | <b>Organization</b>                          |
| 16:00-16:30                 | IT20                | Advanced ultrasonic imaging techniques for evaluating structural integrity of welds  | Dr.R.J.Pardikar                  | TWI  |
| 16:30-16:40                 | SP3                 | "Examples of code compliant applications using Total Focusing Method (TFM)"  | Frederic Reverdy                 | Eddyfi Technologies                          |
| 16:40-16:55                 | CP6                 | Ultrasonic Inspection of Pipes using 4Channel Ultrasonic Inspection System   | N PAVAN KUMAR<br>Pavan Kumar     | HBNI   |
| 16:55-17:10                 | CP204               | Ultrasonic Testing Methods For Inspection Of Large Diameter Bearing Balls  | NAVTESH BAJPAI<br>NAVTESH        | IGCAR  |
| 17:10-17:25                 | CP182               | High Temperature Hydrogen Attack detection with Advanced Ultrasonics   | UDDIN<br>Mohammad<br>Arshad      | Olympus India                                |
| 17:25-17:40                 | CP43                | Design Development and Testing of Reference Standards for Inspecting Aerospace Composites using Ultrasonic Testing           | BHUPATHIRAJU<br>ADITYA VARMA     | NIT, TIRUCHIRAPPALLI                         |
| 17:40-17:55                 | CP166               | Design and Magnification Factor Analysis of Multilinear Stepped Ultrasonic Horn for Machining application using FEM Approach | DHONDE<br>KRISHNAKUMAR<br>GUNAJI | NATIONAL INSTITUTE OF TECHNOLOGY<br>WARANGAL |
| 17:55-18:05                 | CP79                | Ultrasonic Testing Technique on Lead Blocks to Simulate with Radiometry Testing  | GVV ASHOK<br>ASHOK VV<br>GUMMADI | LARSEN&TOUBRO<br>LIMITED                     |
| 18:05-18:15                 | CP103               | Optical Material Detector For Safer Laser Ultrasonic Measurements  | Mikael<br>MALMSTRÖM              | Swerim AB                                    |
| 18:10-18:20                 | CP74                | Microstructure and Ultrasonic Response of Ti6Al4V Alloy  | DWIVEDI ARUN                     | Vikram Sarabhai Space Centre                 |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## NDE FOR COMPOSITES

10<sup>TH</sup> DECEMBER 2021 - 16:00-18:15 hrs

|                             |                     |   |                                      |  |
|-----------------------------|---------------------|---|--------------------------------------|--|
| <b>Session Number</b>       | 4B                  |   |                                      |  |
| <b>Hall</b>                 | Hall B: KALAM       |   |                                      |  |
| <b>Session Chairperson:</b> | P.Vijayaraghavan    |   |                                      |  |
| <b>Keynote Speaker(s):</b>  | Dr.Daniel Kanzler   |   |                                      |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b>           | <b>Organization</b>  |
| 16:00-16:30                 | IT31                | How to create value through NDT - A short discussion on the world of NDT reliability, now and then  | Dr.Daniel Kanzler                    | Applied Validation of NDT  |
| 16:30-16:45                 | CP195               | Fully acoustic NDT for composite plate via LDR technique  | BOSE Tanmoy                          | NIT Meghalaya  |
| 16:45-16:55                 | CP225               | Cure Monitoring of Glass FibreEpoxy Resin Composites using Ultrasonic Techniques  | PERIYANNAN SURESH                    | NIT Warangal, IIT Madras   |
| 16:55-17:05                 | CP143               | Digital Image Correlation DIC And Finite Element Modelling FEM Assessment On Spacecraft Composite Sandwich Structural Joint Under Tensile Loading | KUMAR Harsh                          | ISRO   |
| 17:05-17:20                 | CP229               | A Heuristic Fuzzy Logic Approach to Improve the Acoustic Emission Source Location Data during High Hit Rate in Composite Laminates                | JOSEPH J KAKKASSERY<br>JOSEPH J      | Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology |
| 17:20-17:30                 | CP75                | Digital Image Correlation DIC And Finite Element Modelling FEM Assessment On Spacecraft Composite Sandwich Structural Joint Under Tensile Loading | VIMAN SINGH<br>MARWAL viman<br>singh | U R Rao Satellite Centre   |
| 17:30-17:40                 | CP176               | Comparison study of Inspection techniques of composites   | GOYAL ADARSH                         | NIT TIRUCHIRAPALLI   |
| 17:40-17:50                 | CP108               | Study of Delaminationtype Defects in Composites with Bulk and Guided waves using Noncontact Aircoupled Ultrasound                                 | SONKUSARE<br>Tushar Murlidhar        | National Institute of Technology, Tiruchirappalli, CNDE Lab, IIT Madras    |
| 17:50-18:05                 | CP183               | Non Destructive Evaluation On Nano composite Coating With Biopolymer As A Corrosion Inhibitor In Carbon Steel                                     | Deepa SREE S                         | SRIET  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **INDUSTRIAL SESSION: MANUFACTURING INDUSTRIES**

**10<sup>TH</sup> DECEMBER 2021 - 16:00-18:00 hrs**

|                             |                     |                          |   |   |
|-----------------------------|---------------------|--------------------------|---|---|
| <b>Session Number</b>       | 4C                  |                          |   |   |
| <b>Hall</b>                 | Hall C: RAMAN       |                          |   |   |
| <b>Session Chairperson:</b> | Tushar Mukherjee    |                          |   |   |
| <b>Keynote Speaker(s):</b>  |                     |                          |   |   |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b> | <b>Name of the Speaker</b>                                      | <b>Organization</b>   |
| 16:00 - 16:20               |                     | Pressure Vessels         | Mr. R Rajkumar  | Head - QA, QC, NDE, Lab & Metallurgy, L&T Special Steels & Heavy Forgings |
| 16:20 - 16:40               |                     | Boilers                  | Mr. Christopher Jayaraj / Mr. Avinash                           | Thermax, Pune   |
| 16:40 - 17:00               |                     | Pipe Fabrication         | Mr. Anil Mehta  | ASNT level III, L&T   |
| 17:00 - 17:30               |                     | Panel Discussion         | Tushar Mukherjee / U Anand / Anil Mehta / Christopher / Avinash |   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **NDE 4.0, AI, MACHINE VISION, IMAGE PROCESSING**

**10<sup>TH</sup> DECEMBER 2021 - 16:00-18:40 hrs**

|                             |                                      |   |                            |  |
|-----------------------------|--------------------------------------|---|----------------------------|--|
| <b>Session Number</b>       | 4D                                   |   |                            |  |
| <b>Hall</b>                 | Hall D: FARADAY                      |   |                            |  |
| <b>Session Chairperson:</b> | Dr. Johannes Vrana                   |   |                            |  |
| <b>Keynote Speaker(s):</b>  | Dr.M.T.Shyamsunder, Dr.Praful Sharma |   |                            |  |
| <b>Time</b>                 | <b>Abstract No.</b>                  | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>  |
| 16:00-16:30                 | IT21                                 | Role of Digital Transformation in Industrial Inspection - Trends and Advances | Dr.M.T.Shyamsunder         | NCB, ISNT  |
| 16:30-17:00                 | IT27                                 | What does Predictive Maintenance mean to Asset Integrity Management           | Dr. Prafull Sharma         | CorrosionRADAR   |
| 17:00-17:15                 | CP122                                | Empowering NDE SMEs with Assisted Interpretation of NDE Data                  | RAJPUT Amit                | XaaSLabs Inc   |
| 17:15-17:30                 | CP203                                | Machine vision Importance of vision in the system                             | KOMMAREDDY Vamshi          | GE Research  |
| 17:30-17:45                 | CP53                                 | StepbyStep NDE Technologies Along the Journey Toward Industry 40              | LANE Christopher           | Olympus  |
| 17:45-18:00                 | CP71                                 | NDT AND INDUSTRY 40   | DANDAMUDI KAVYA            | GALAXY INSPECTION SOLUTIONS                                  |
| 18:00-18:10                 | CP220                                | DIGITAL AVATAR OF INDIAN DEFENCE MALES GENERATED FROM 3D ANTHROPOMETRIC SCAN  | LALHMUNLIEN ROBERT VARTE   | DIPAS, DRDO  |
| 18:10-18:25                 | CP27                                 | Enhance subsurface details using Non Sub sample Contourlet Transform          | B Raja Sekhar              | Koneru Lakshmaiah Education Foundation, Education Foundation |
| 18:25-18:40                 | CP130                                | Enhancing the Digital Experience in Industrial Inspection                     | S Sathyapriyan             | Madras Mindworks Pvt Ltd, digitalNDE                         |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **ROLE OF NDE IN AEROSPACE INDUSTRIES/NDE TRAINING**

**10<sup>TH</sup> DECEMBER 2021 - 16:00-18:15 hrs**

|                             |  |  |                            |                                       |
|-----------------------------|--|--|----------------------------|---------------------------------------|
| <b>Session Number</b>       | 4E   |  |                            |                                       |
| <b>Hall</b>                 | Hall E: MAXWELL  |  |                            |                                       |
| <b>Session Chairperson:</b> | Dr.Kavitha Arunachalam   |  |                            |                                       |
| <b>Keynote Speaker(s):</b>  | Diwakar Joshi, Dr.M. Phani Surya Kiran, Mrs.M.R.Vijaya Lakshmi |  |                            |                                       |
| <b>Time</b>                 | <b>Abstract No.</b>  | <b>Title of the talk</b>   | <b>Name of the Speaker</b> | <b>Organization</b>                   |
| 16:00-16:30                 | IT22   | NDE Training: Pre and Post Covid-19 Pandemic   | Diwakar Joshi              | Insight Quality Services              |
| 16:30-17:00                 | IT23   | Extent of NDE's Role in Life Revision Studies of Aeroengines- DMRL Experience                                  | Dr.M. Phani Surya Kiran    | DMRL                                  |
| 17:00-17:30                 | IT24   | Role of NDE in QA of Aeroengine Hardware   | Mrs.M.R. Vijaya Lakshmi    | Gas Turbine Research Establishment    |
| 17:30-17:45                 | CP88   | Why Written Practice matters in qualification of aerospace NDT personnel acc to EN4179NAS410                   | ZAVADIL Tomas              | ATG (Advanced Technology Group), Ltd. |
| 17:45-18:00                 | CP247  | Digital Radiography For Integrity Verification Of Miniature Multi-Layer  | Rajeev J , Binu            | Vikram Sarabhai Space Center          |
| 18:00-18:15                 | CP193  | Fusion of NDT Data for Structural Integrity Assessment of Brazed Joints in a Cryogenic Engine Nozzle Divergent | SWAIN DIGENDRANATH         | Vikram Sarabhai Space Center          |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## RADIOGRAPHY

11<sup>TH</sup> DECEMBER 2021 - 09:00-10:30 hrs

|                             |                      |   |                            |  |
|-----------------------------|----------------------|---|----------------------------|--|
| <b>Session Number</b>       | 5A                   |   |                            |  |
| <b>Hall</b>                 | Hall A: BHABHA       |   |                            |  |
| <b>Session Chairperson:</b> | Dr.M.Arumugam        |   |                            |  |
| <b>Keynote Speaker(s):</b>  | Mr.Raj Venkatachalam |   |                            |  |
| <b>Time</b>                 | <b>Abstract No.</b>  | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>  |
| 9:00 - 09:30                | IT25                 | Engineered solutions for Smart Radiography in the field and beyond  | Mr.Raj Venkatachalam       | VMI  |
| 9:30 - 9:45                 | CP115                | Recalibrate your Detector before Building the CT scanner  | KUMARI Kajal               | IIT Roorkee  |
| 9:45 - 10:00                | CP127                | Investigation of Porosity Distribution through NonDestructive Testing Based MicroCT and its Effect on Energy Absorption of Graded Three Phase Foams | BONTHU DILEEP              | NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, AZERIRI  |
| 10:00 - 10:10               | CP39                 | Lithiumion Battery Inspection   | NEGI Shubham Singh         | National Institute of Technology Trichy  |
| 10:10 - 10:20               | CP98                 | Metallurgical Characterization of UT defect observed in Copper alloy Forgings used in Cryogenic Engines with the aid of CT                          | MANU JOSEPH<br>Manu        | Liquid Propulsion Systems Centre, Indian Space Research Organization, Vikram Sarabhai Space Centre, Indian Space Research Organization |
| 10:20 - 10:35               | CP19                 | Case Study 8 NPS ASS Piping Radiography Tested Weld Joint Leak Testing Failures   | GUNASEKARAN SANGILI        | HEISCO   |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## ELECTROMAGNETIC NDE

11<sup>TH</sup> DECEMBER 2021 - 09:00-12:30 hrs

|                             |  |  |                               |   |
|-----------------------------|--|--|-------------------------------|---|
| <b>Session Number</b>       | 5B   |  |                               |   |
| <b>Hall</b>                 | Hall B: KALAM                                    |  |                               |   |
| <b>Session Chairperson:</b> | Dr Ravibabu Mulaveesala                          |  |                               |   |
| <b>Keynote Speaker(s):</b>  | Dr. Saptarshi Mukherjee, Dr. Kavitha Arunachalam |  |                               |   |
| <b>Time</b>                 | <b>Abstract No.</b>                              | <b>Title of the talk</b>   | <b>Name of the Speaker</b>    | <b>Organization</b>   |
| 9:00 - 09:30                | IT26   | Electromagnetic Nondestructive Evaluation (NDE) Techniques: Breaking diffraction limits  | Dr. Saptarshi Mukherjee       | Lawrence Livermore National Laboratory  |
| 09:30-10:00                 | IT29   | Millimetre waves for non-destructive testing - techniques and applications   | Dr. Kavitha Arunachalam       | IIT, Chennai  |
| 10:00-10:10                 | SP4  | Advanced Eddy Current Array Technologies for the Detection and Depth Sizing of Stress Corrosion Cracking in Carbon Steel Pipelines | Mathieu Bouchard              | Eddy Technologies   |
| 10:10 - 10:25               | CP241  | Electro-Magnetic Acoustic Transducer (EMAT)  | Volkan Eritmen                | Innerspec Technologies  |
| 10:25-10:40                 | CP101  | Nondestructive Evaluation of Anisotropic Ferromagnetic Materials   | CHADY Tomasz                  | West Pomeranian University of Technology  |
| 10:40 - 10:55               | CP116  | Effect of defect width variation on the defect detection sensitivity of magnetic nanoemulsionbased optical sensor                  | NANDY MANALI                  | Indira Gandhi Center for Atomic Research  |
| 10:55- 11:10                | CP113  | UNIVERSAL MAGNETIC PARTICLE TESTING GUAGE  | PAVANKUMAR GOPAL RAO BAGALKOT | Bhandari Forging  |
| 11:10-11:25                 | CP142  | Effect of Elastic and Plastic Deformation on the Output of Metal Magnetic Memory NDE Technique                                     | AHMADZADE-BEIRAKI Esmaeel     | Ferdowsi University of Mashhad, Department of Materials Engineering, Faculty of Engineering, Ferdowsi University of Mashhad, PO Box |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **ELECTROMAGNETIC NDE**

**11<sup>TH</sup> DECEMBER 2021 - 09:00-12:30 hrs**

|               |       |   |                           |   |
|---------------|-------|---|---------------------------|---|
| 11:25-11:40   | CP201 | Magnetic NDE methods to distinct bad quality electrical steel   | ROY Rajat Kumar           | CSIR-National Metallurgical Laboratory, Jamshedpur, Jharkhand- 831007, NTPC-NETRA, Greater Noida-201306 |
| 11:40-11:55   | CP207 | Understanding Tensile Deformation Induced Changes in Ferritic Steels by Magnetic Barkhausen Emission and XRay Diffraction | RAJA Manojkumar           | Indira Gandhi Center for Atomic Research  |
| 11:40 - 11:55 | CP242 | Magnetic Rope Testing (MRT)   | Dr. Alexander Shalashilin | INTRON PLUS, Ltd  |
| 11:55-12:10   | CP227 | Development of the new fullautomatic magnetic particle testing equipment  | MICHITAKA HORI Michitaka  | Nihon Denji Sokki Co., LTD, Nihon Denji Sokki Co., LTD.   |
| 12:10-12:25   | CP73  | Comparison of Dye Penetrant Methods Sensitivity on Super Alloy Investment Castings  | DWIVEDI ARUN              | Vikram Sarabhai Space Centre  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **NDE IN NUCLEAR , POWER & MANUFACTURING**

**11<sup>TH</sup> DECEMBER 2021 - 09:00-10:30 hrs**

|                             |                     |   |                                |  |
|-----------------------------|---------------------|---|--------------------------------|--|
| <b>Session Number</b>       | 5C                  |   |                                |  |
| <b>Hall</b>                 | Hall C: RAMAN       |   |                                |  |
| <b>Session Chairperson:</b> | Ms.M.Menaka         |   |                                |  |
| <b>Keynote Speaker(s):</b>  |                     |   |                                |  |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>  | <b>Name of the Speaker</b>     | <b>Organization</b>  |
| 9:00 - 09:15                | CP69                | Advanced NDE Tools for Health Life Assessment of Critical Power Plant Components  | DAS ANIL KUMAR                 | NTPC-NETRA   |
| 9:15 - 09:30                | CP240               | Application of Ultrasonic Testing Techniques in Inspection of FBTR Steam Generator Shell Repair                           | E.Ramesh                       | Indira Gandhi Center for Atomic Research                                   |
| 9:30 - 09:45                | CP224               | NDE Qualification of Weld Joints in Thin Rotating Components  | TRIPATHI shri                  | QAD,IGCAR , RRDD,IGCAR   |
| 9:45 - 09:55                | CP222               | Application of NDE during fabrication of Nickel detector assembly for PFBR  | P RAMESH                       | IGCAR KALPAKKM, IGCAR KALPAKKAM  |
| 9:55 - 10:05                | CP212               | Establishment Of Fabrication Sequence During Manufacturing Of Jacketed Cylindrical Tanks For Back End Fuel Cycle Facility | CHITRA DURAIRAJ                | IGCAR  |
| 10:05 - 10:20               | CP215               | Feasibility Studies on use of Single Piece Bottom Closure for geometrically Safe Annular Tanks for Reprocessing Plants    | CHENTHILKUM AR P               | Indira Gandhi Centre for Atomic Research                                   |
| 10:20 - 10:35               | CP234               | Autonomous system for Nondestructive evaluation on the assessment of the safety of weld joints                            | JEEVAN SAIKIA<br>JEEVAN SAIKIA | Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology |



# Virtual Conference & Exhibition on NON DESTRUCTIVE EVALUATION

## NDE IN O&G INDUSTRIES

11<sup>TH</sup> DECEMBER 2021 - 09:00-10:45 hrs

|                             |                         |   |  |   |
|-----------------------------|-------------------------|---|--|---|
| <b>Session Number</b>       | 5D                      |   |  |   |
| <b>Hall</b>                 | Hall D: FARADAY         |   |  |   |
| <b>Session Chairperson:</b> | Dr.M. Phani Surya Kiran |   |  |   |
| <b>Keynote Speaker(s):</b>  |                         |   |  |   |
| <b>Time</b>                 | <b>Abstract No.</b>     | <b>Title of the talk</b>  | <b>Name of the Speaker</b>                           | <b>Organization</b>   |
| 09:00 - 09:10               | SP5                     | Sonyks Guided Wave Technology - Improved method inspection for detecting corrosion in pipes and pipelines       | Paul JACKSON   | Eddyfi Technologies   |
| 9:10 - 09:20                | SP6                     | Next Generation Tank Floor Scanning - Total Inspection Efficiency   | Stuart P. KENNY                                      | Eddyfi Technologies   |
| 9:20 - 09:35                | CP243                   | Wireless Corrosion Monitoring   | Jake Tivey   | Inductosense Limited  |
| 09:35 - 09:50               | CP20                    | NDE OF DISTILLATION COLUMN SHELL A CASE STUDY   | PATEL NILESH   | Reliance industries limited   |
| 09:50 - 10:05               | CP35                    | Insitu Inspection Of Cargo System On Liquefied Petroleum Gas LPG Carriers                                       | INGALE Tejas Nitin                                   | Injotech India Pvt. Ltd.  |
| 10:05 - 10:20               | CP22                    | Acoustic Emission an effective Technique for Monitoring Inservice Fiber Reinforced Plastic FRP Vessels          | WAGH PRASHANT  | Institute of Nondestructive Testing & Training, website indtt.org   |
| 10:20 - 10:30               | CP111                   | Inspection of Corrosion Under Insulation CUI Using Ultrasonic Waveguide Temperature Sensor                      | TATHE Akash Sahebrao                                 | Dept. of Physics, National Institute of Technology (NIT), Tiruchirappalli-620 015, India, Centre for Nondestructive Evaluation (CNDE), Indian Institute of Technology -Madras, Chen |
| 10:30-10:45                 | CP7                     | Partial Discharge Detection and Classification for Condition Monitoring of High Voltage AC Gas Insulated System | YUGANDHARA<br>RAO YADAM<br>YUGANDHARA<br>RAO & YADAM | IIT MADRAS  |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **NDE MODELLING & SCAN PLAN**

**11<sup>TH</sup> DECEMBER 2021 - 09:00-10:30 hrs**

|                             |                       |  |                            |  |
|-----------------------------|-----------------------|--|----------------------------|--|
| <b>Session Number</b>       | 5E                    |  |                            |  |
| <b>Hall</b>                 | Hall E                |  |                            |  |
| <b>Session Chairperson:</b> | Prof.S.Gopalakrishnan |  |                            |  |
| <b>Keynote Speaker(s):</b>  |                       |  |                            |  |
| <b>Time</b>                 | <b>Abstract No.</b>   | <b>Title of the talk</b>   | <b>Name of the Speaker</b> | <b>Organization</b>                                      |
| 9:00 - 9:15                 | CP62                  | Spot Weld Shape Analysis Using FEM Approach  | PATIL Pankaj               | National institute of Technology Warangal, Project Guide |
| 9:15 - 9:30                 | CP106                 | Computational Study on Interaction of Nonlinear Waves with a Localized Reids Pinched Hysteretic Damage   | GHODAKE Pravinkumar        | Indian Institute of Technology Bombay                    |
| 9:30- 9: 40                 | CP138                 | Development of SEM Based Model for Wave Propagation in Heterogeneous Medium  | SAURABH AGARWAL            | IIT Jammu  |
| 9:40- 9: 55                 | CP85                  | Finite Element Simulation of Asymmetry in Material Pileup in a Ball Indentation Test for Materials with Gradient in Properties and Validation with Experiment                      | DUBEY Abhinav              | Bhabha Atomic Research Centre                            |
| 9:55- 10: 10                | CP192                 | Numerical Estimation of Effective Crosssection for the Collisional Scattering Loss of Helium Molecules due to Background Molecules in the NDT Helium Leak Testing Method in Vacuum | SHARMA GAYATRI             | GAUTAM BUDDHA UNIVERSITY                                 |
| 10:10- 10: 25               | CP51                  | Automated Coverage Path Planning For Inspection Of Panels Using Camera Viewpoints  | SAURABH CHATTERJEE Saurabh | Indian Institute of Space Science and Technology         |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## Special Session on **WOMEN EMPOWERMENT IN NDE**

**11<sup>TH</sup> DECEMBER 2021 - 11:00 -13:00 hrs**

| Session Chairperson: | Navita Gupta  |                       |   |
|----------------------|---|-----------------------|---|
| Time                 | Title of the talk                                       | Name of the Speaker   | Designation   |
| 11.00 - 11.10        | Women in NDE in India and Global Scenario               | Navita Gupta          | Director- Satyakiran Engineers Private Limited, Delhi |
| 11.10- 11.30         | Women in Aviation - The unseen Glass Ceiling            | Antionette Bailey     | Director - TB3 NDT Consulting LLC, USA                |
| 11.30 - 11.50        | Women in Nuclear Inspections - The unseen Glass Ceiling | KJ Umrani             | Associate Director (QA), NPCIL, Pune                  |
| 11.50- 12.10         | Women in Manufacturing - The unseen Glass Ceiling       | Hemal Mehta           | Managing Director, P Met Hi-Tec Co. Ltd, Vadodara     |
| 12.10- 12.30         | Women in Airforce - The unseen Glass Ceiling            | Wg Cdr Namrita Chandi | Helicopter Pilot (Ex), Indian Airforce                |
| 12.30 - 1240         | Address by President ISNT                               | Dr B Venkatraman      | President ISNT  |
| 1240 - 1255          | Panel discussion and open house questions.              |                       |   |
| 1255 - 1300          | Closing and Vote of Thanks                              | Navita Gupta          | Session Chair   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **GUIDED WAVE & AIRCOUPLED UT**

**11<sup>TH</sup> DECEMBER 2021 - 10:45 -12:45 hrs**

|                             |                     |  |   |   |
|-----------------------------|---------------------|--|---|---|
| <b>Session Number</b>       | 6A                  |  |   |   |
| <b>Hall</b>                 | Hall A: BHABHA      |  |   |   |
| <b>Session Chairperson:</b> | Vamshi Kommareddy   |  |   |   |
| <b>Keynote Speaker(s):</b>  |                     |  |   |   |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>   | <b>Name of the Speaker</b>                | <b>Organization</b>                           |
| 10:45-11:00                 | CP117               | Air Coupled Ultrasonic Testing Of Face Masks   | RAVINDRAN POOJA                           | Azeriri Private Limited                       |
| 11:00-11:15                 | CP160               | Ultrasonic Spiral Strip Waveguide sensor for Temperature Measurement of Solid Surface                                | VALABHOJU ARUN                            | NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL     |
| 11:15-11:25                 | CP161               | Temperature Mapping near an elliptical waveguide using ultrasoundguided wave technique                               | GOWRINATH Ayyapu Venkata Phani            | Indian Institute of technology Madras, Guide  |
| 11:25-11:35                 | CP197               | Development of Ultrasonic Long Waveguide Level Sensor using Different Wave modes                                     | ABHISHEK KUMAR Abhishek kumar             | National Institute of Technology, Warangal    |
| 11:35-11:45                 | CP210               | Depth Measurement Of Surface Discontinuities Up To A Depth Of One Wavelength By Ultrasonic Testing Technique         | MURUGAN K                                 | Indira Gandhi Centre for Atomic Research      |
| 11:45-11:55                 | CP228               | Development of novel Ultrasonic waveguide sensor with nonleaky waves for Multi point Temperature Measurements        | SHARMA Atul                               | NIT Trichy                                    |
| 11:55-12:10                 | CP235               | Development of Ultrasonic Long Waveguide Level Sensor using Different Wave modes                                     | ABHISHEK KUMAR Abhishek kumar             | NIT WARANGAL, NIT WARANAL                     |
| 12:10-12:25                 | CP107               | Impact of Operating Parameters on the Magnetostrictive Sensor MsS Signals obtained from Ferrous and Nonferrous Pipes | PANDA Ashis Kumar                         | National Metallurgical Laboratory, Jamshedpur |
| 12:25-12:35                 | CP94                | Remote Inspection Using Cylindrical Waveguide With Conical Transition Profile  | ZUL KARNAIN Ahmed Al                      | IIT Madras                                    |
| 12:35-12:50                 |                     | Damage Source Localisation in Metal Plate using Passive Acoustic Emission Technique                                  | Nawal Kishor Banjara and Saptarshi Sasmal | CSIR-Structural Engineering Research Centre   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUTION**

## 11<sup>TH</sup> DECEMBER 2021 - 10:45 -12:30 hrs

|                             |                               |   |                            |  |
|-----------------------------|-------------------------------|---|----------------------------|--|
| <b>Session Number</b>       | 6C                            |   |                            |  |
| <b>Hall</b>                 | Hall C: RAMAN                 |   |                            |  |
| <b>Session Chairperson:</b> | Prof.Krishnan Balasubramanian |   |                            |  |
| <b>Keynote Speaker(s):</b>  | Dr.Jyotirmayee Dash           |   |                            |  |
|                             | <b>Abstract No.</b>           | <b>Title of the talk</b>  | <b>Name of the Speaker</b> | <b>Organization</b>  |
| 10:45-11:15                 | IT28                          | An Overview of Terahertz Technology for Non-destructive Testing   | Dr.Jyotirmayee Dash        | TeraLumen Solutions  |
| 11:15-11:30                 | CP26                          | Measurement Of Thickness Of Polychlorotrifluoroethylene Coating Over Metallic Seals Using Terahertz Time Domain Spectroscopy                                    | B NIDHEESH KUMAR           | VIKRAM SARABHAI SPACE CENTRE                                     |
| 11:30-11:45                 | CP31                          | Terahertz Continuous Wave Imaging For Detection of Debonds In Cryofoam Insulation Used In Cryogenic Tanks of Launch Vehicles                                    | B NIDHEESH KUMAR           | VIKRAM SARABHAI SPACE CENTRE, TeralumensolutionsPvt. Ltd.        |
| 11:45-12:00                 | CP191                         | A Combinatorial Analysis of Nondestructive Evaluation of Defects and Moisture Ingression in Glass Fiber Reinforced Composites by Terahertz and Infrared Imaging | RAY SHAUMIK                | TeraLumen Solutions Pvt. Ltd., Institute of Fluid Flow Machinery |

## INDUSTRIAL SESSION-NDE IN O&G INDUSTRIES

## 11<sup>TH</sup> DECEMBER 2021 - 11:30-13:00 hrs

|                             |                     |                     |                          |                            |   |
|-----------------------------|---------------------|---------------------|--------------------------|----------------------------|---|
| <b>Session Number</b>       | 6D                  |                     |                          |                            |   |
| <b>Hall</b>                 | Hall D              |                     |                          |                            |   |
| <b>Session Chairperson:</b> | Mr.Umakanthan Anand |                     |                          |                            |   |
| <b>Keynote Speaker(s):</b>  |                     |                     |                          |                            |   |
|                             | <b>Time</b>         | <b>Abstract No.</b> | <b>Title of the talk</b> | <b>Name of the Speaker</b> | <b>Organization</b>                                   |
| 11:30 - 11:50               |                     |                     | Industry- Refinery       | Mr. Chandra More           | Head of Inspection, BPCL Refinery, Bina, MP           |
| 11:50 - 12:10               |                     |                     | Industry-Upstream        | Mr. Savio Rebello          | Head Engineering, Reliance Oil & Gas, Kakinada        |
| 12:10 - 12:30               |                     |                     | Industry-Petrochemical   | Mr. Paresh Goswami         | Head of Inspection RIL, Hazira Manufacturing Division |
| 12:30-13:00                 |                     |                     | Panel Discussion         |                            |   |



# Virtual Conference & Exhibition on **NON DESTRUCTIVE EVALUATION**

## **QUALITY CONTROL, ASSURANCE & RELIABILITY**

**11<sup>TH</sup> DECEMBER 2021 - 10:45 -13:15 hrs**

|                             |                     |  |                            |   |
|-----------------------------|---------------------|--|----------------------------|---|
| <b>Session Number</b>       | 6E                  |  |                            |   |
| <b>Hall</b>                 | Hall E              |  |                            |   |
| <b>Session Chairperson:</b> | Dr.A.U.Sonawane     |  |                            |   |
| <b>Keynote Speaker(s):</b>  | Dr.M.Arumugam       |  |                            |   |
| <b>Time</b>                 | <b>Abstract No.</b> | <b>Title of the talk</b>   | <b>Name of the Speaker</b> | <b>Organization</b>   |
| 10:45-11:15                 | IT30                | Role of NDE in reliability assessment of Liquid and Cryo Propulsion systems used in Indian Space programme         | Dr.M.Arumugam              | LPSC, ISRO  |
| 11:15-11:30                 | CP174               | Problem Solving Quality Management Tools for NDT Applications  | SANGILI GUNASEKARAN        | Heavy Engineering Industries and Shipbuilding Company K.S.C(Public) |
| 11:30-11:40                 | CP218               | Challenges in quality assurance NDE during fabrication of equipments and vessels of Sodium Technology Complex      | G KALIAMOORTHY             | FAS/QAD/RESG/SQRMG/IGCAR/DAE, QAD/RESG/SQRMG/IGCAR/DAE              |
| 11:40-11:55                 | CP223               | Haptics as an NDE tool for subjective evaluation for quality assurance during fabrication                          | TRIPATHI SHRI KRISHNA      | IGCAR   |
| 11:55-12:10                 | CP44                | Study of Reliability of A Manual and Automatic Inspection System for Detecting Defects in the Aerospace Composites | R RAHUL                    | NIT, TIRUCHIRAPPALLI  |
| 12:10-12:25                 | CP219               | QA NDE during Fabrication of Annular Linear Induction Pump for FBR   | ALKA KUMARI                | IGCAR KALPAKKM  |
| 12:25-12:40                 | CP34                | Transition From MT PT to ECT using flexible Surface Array probe  | Krishna Bhuta              | Topax NDT   |