NON DESTRUCTIVE EVALUATION



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Conference Programme

NDE 2019

conference & exhibition on

NON DESTRUCTIVE EVALUATION



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

| Date: 5th December 2019 | Thursday | |
|-------------------------|----------------------------------------|--|
| | | |
| 09:00 - 10:30 Hrs | Conference Inauguration | |
| 10:30 - 11:30 Hrs | Inauguration of Exhibition & Tea Break | |



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

| Date: 5th Decem | her 2019 | Thursday |
|------------------------|----------|-----------|
| Date. Jul Detelli | NCI ZUIJ | IIIuISuay |

| Session on Mem | norial Talks (11:30 - 13:00 Hrs) | Dr Vikram Sarabhai Hall |
|-----------------------|----------------------------------|----------------------------------------------------------------------------|
| | | |
| Chairman | Prof. Krishnan Balasubramaniam | |
| Dr Baldev Raj Memo | orial Talk | |
| 11:30 - 12:15 Hrs | Prof. Srinivasa Ranganathan | NDE contributions to recreating our past cultural heritage |
| Shri Ramesh Bhai Pa | arikh Memorial Talk | |
| 12:15 - 13:00 Hrs | Ashok Mandal | Management of Safety on Indian Railways through Non-destructive Testing |

| 13:00 - 14:00 Hrs | Lunch |
|-----------------------------------|---------------------------------------------------------------|
| | |
| 14:00 - 15:00 Hrs (Open Session) | Poster Session - I at Exhibition Area |
| | Availability of Authors of Poster Presentation at Poster Area |
| | Quiz Competition |
| | Visit to Exhibition Area |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 5th December 2019 Thursday

| Plenary Session - I (15:00 - 16:15 Hrs) | | Dr Vikram Sara | abhai Hall |
|-----------------------------------------|--------------------------------|-------------------|--------------------------------------------------------------------------------|
| | | | |
| Chairman | | | |
| 15:00 - 15:25 Hrs | Prof. Krishnan Balasubramaniam | IIT Madras, India | Air Coupled Ultrasonic NDE: An Overview eluding to New Frontiers in Inspection |
| 15:25 - 15:50 Hrs | Dr. Ernst Niederleithinger | BAM, Germany | Ultrasonic methods for concrete: To boldly see, what we have not seen before |
| 15:50 - 16:15 Hrs | Vinay B Jammu | GE | Digital Twin: Fusion of Physical-Digital for Driving Digital Transformation |

16:15 - 16:45 Hrs Tea Break



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 5th December 2019 Thursday

| Session | 1 A | | Acoustic Emission | C V Raman Hall |
|---------|------------|--------------|---------------------|------------------------------------------------------------------------------------------|
| Chairm | an | Dr MR E | Shat | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 16:45 | 17:10 | IT16 | Dr CK Mukhopadhyay | Acoustic emission technique for process monitoring and structural integrity monitoring |
| | | | | applications |
| 17:10 | 17:25 | CP032 | C K Mukhopadhyay | Characterization of Plastic Deformation using Acoustic Emission during Bending of SS |
| | | | | 304L |
| 17:25 | 17:40 | CP036 | TK Haneef | Use of Acoustic Emission Technique for Leak Detection in Pressurised Carbon Steel Piping |
| 17:40 | 17:55 | CP181 | Nawalkishor BANJARA | Detection of Leakage in Pipelines using Passive Acoustic Emission Technique |
| 17:55 | 18:10 | CP335 | P Anjali | Characteristics of Acoustic Emissions generated during Rebar Corrosion in Reinforced |
| - | | | | Concrete |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 5th December 2019 Thursday

| Session | 1B | | Automation and Robotics in NDE | W C Röntgen Hall |
|---------|-------|--------------|--------------------------------|----------------------------------------------------------------------------------------|
| Chairm | an | Krishna | Mohan Reddy | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 16:45 | 17:10 | IT24 | Dr Thomas Gramberger | Novel high performance robotic based system for NDT and Metrology |
| 17:10 | 17:25 | CP063 | Christopher LANE | Advanced Inspection Technology for Automated NDE Applications |
| 17:25 | 17:40 | CP163 | Ondrej DOUBEK | Automatic Visual Systems For Automotive Industry bearings |
| 17:40 | 17:55 | CP164 | Ondrej DOUBEK | Automatic FPI Systems For Automotive Industry |
| 17:55 | 18:10 | CP337 | Debdutta Mallik | Significance Of NDT For Monitoring Of Manufacturing Flaws In Railway Rails To Minimize |
| | | | | Service Failures |
| 18:10 | 18:17 | CP084 | Pranjal SHUKLA | DESIGN AND FABRICATION OF A NDT PIPE CRAWLING MECHANISM |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 5th December 2019 Thursday

| Session | 1C | | Code, Standard & Certification in NDT | Max Planck Hall |
|---------|-----------|--------------|---------------------------------------|-----------------------------------------------------------------------------------|
| Chairm | an | N Sadas | ivan | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 16:45 | 17:10 | IT25 | Diwakar Joshi | NDT training and Certification - The Next level |
| 17:10 | 17:25 | CP022 | Surendra Mungel | NABL Certification for NDT Laboratories |
| 17:25 | 17:40 | CP024 | Mugdha Joshi | Different International Certification Schemes for Welding Inspectors |
| 17:40 | 17:55 | CP025 | Diwakar Joshi | ASME Section V Edition 2019 Code Changes |
| 17:55 | 18:10 | CP136 | Sangili Gunasekaran | API650 Code AnnexU Requirements for Ultrasonic Examination in lieu of Radiography |
| 18:10 | 18:25 | CP180 | Santosh Vijay Gupte | Need Road Map For Getting Certified To API Specification Q2 For NDT Service |
| | | | | Organizations in Oil Gas |
| 18:25 | 18:32 | CP021 | Diwakar Damodar Joshi | SNTTC1A Edition 2016 Implementation |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 5th December 2019 Thursday

| Session | 1D | | Tera Hertz and Microwave NDE | Michael Faraday Hall |
|---------|-------|--------------|-------------------------------|---------------------------------------------------------------------------------------|
| Chairma | an | Prof. Kr | ishnan Balasubramaniam | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 16:45 | 17:10 | IT10 | Dr Phil Taday | Application of terahertz pulses to NDE of coatings |
| 17:10 | 17:25 | CP028 | Pakkathillam Jayaram Kizhekke | Planar Printed E Field Sensor Array for Microwave NDE of Composites |
| 17:25 | 17:40 | CP085 | Mercy LATHA A | Rapid Nondestructive Evaluation of Fireproof Coating Degradation using Terahertz Line |
| | | | | Scanner |
| 17:40 | 17:55 | CP091 | Harikrishnan KAIMAL | Rapid Terahertz Nondestructive Evaluation of GFRP wood Sandwich Composite using |
| | | | | Adaptive Sampling Technique |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 5th December 2019 Thursday

| Session | 1E | | Ultrasonic Testing | Lord Rayleigh Hall |
|---------|-------|--------------|--------------------|-----------------------------------------------------------------------------------------|
| Chairma | an | Dr Anisl | n Kumar | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 16:45 | 17:10 | IT17 | Dr K Srinivas | Structural Integrity assessment of composite pressure vessels using Acousto-ultrasonic |
| | | | | Techniques |
| 17:10 | 17:25 | CP045 | Andrey Bulavinov | Ultrasonics in automobile industry measuring or testing |
| 17:25 | 17:40 | CP125 | P. Chenthil Kumar | Development of Technique for Ultrasonic Testing of Small Bore Nozzle Welds |
| 17:40 | 17:55 | CP309 | S Sarath | Methodology for ultrasonic examination of austenitic stainless steel using twin crystal |
| | | | | longitudinal wave angle probe |
| 17:55 | 18:10 | CP321 | C Ajay | Assessment of Spurious Ultrasonic reflections from grain boundaries in SS weld joints |
| 18:10 | 18:17 | CP322 | C Ajay | Immersion Recordable UT of tube tube sheet joints |
| 18:17 | 18:24 | CP339 | Ashutosh Singh | Significance of Flaw Characterization & Sizing Accuracy While Testing Heavy Forgings by |
| | | | | Ultrasonic Testing (Pulse-Echo Method) |
| 18:24 | 18:31 | CP353 | Shyam Sundar M | Fluid Level Measurement at Higher Temperatures Using Ultrasonic Bulk Waves |



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 5th December 2019 Thursday

Industry Session - 1 (17:00-18:30 Hrs)

Exhibition Area

| Reinforcing Gaps in Codes and Standards for NDE | | | | |
|-------------------------------------------------|--------------------------------|-------------------------------------------------|--|--|
| Name of the speaker Organisation Topic | | | | |
| Sh. P Raghavendra | L&T | Reinforcing gaps in Codes and Standards for NDE | | |
| Sh N Sadasivan | Materials Evaluation Services | Reinforcing gaps in Codes and Standards for NDE | | |
| Dr. V Chandiramani | ASME Sec VIII Committee Member | Reinforcing gaps in Codes and Standards for NDE | | |

18:30 Hrs onwards

Cultural Programme followed by Networking Dinner



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 2A | | Multi NDE | C V Raman Hall |
|---------|-------|--------------|-------------------------|--------------------------------------------------------------------------------|
| Chairma | an | Dr Phil 1 | Гаdау | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT06 | G Levin | Role of NDE in the Success Story of Indian Space Programme |
| 9:25 | 9:40 | CP053 | Krishna Kumar Rai | Inspection of Concrete Lined Seawater Carrying Pipeline A case study |
| 9:40 | 9:55 | CP106 | Abinash Behera | NDT IN MRO OF AEROENGINE COMPONENTS AT MILITARY AVIATION INDUSTRY |
| 9:55 | 10:10 | CP274 | Rajakishore Sahoo | Non Destructive Inspection of Replaceable Tooth Flank Used in Gear Rim |
| | | | | Applications A Failure Analysis Case Study |
| 10:10 | 10:25 | CP035 | Laxmikant Sarjerao Mane | Study of Effect of Surface Roughness in Single Lap Joint SLJ of Carbon Fiber |
| | | | | Reinforced Polymer CFRP Composites using Radiography and Thermography |
| 10:25 | 10:32 | CP312 | Sangili Gunasekaran | Case Study Leak Testing Failures at Ultrasonic Valve Pit Area Gas Plant Piping |
| | | | | Construction |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 2 B | | Radiation Safety and Regulation | W C Röntgen Hall |
|---------|------------|--------------|---------------------------------|---------------------------------------------------------------------------------|
| Chairm | Chairman V | | haran | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT04 | Dr A U Sonawane | Recent Regulatory Measures For Radiation Safety In Use Of Ionizing Radiation In |
| | | | | Non-Destructive Evaluation Practices |
| 9:25 | 9:40 | CP141 | Naranath NAUSHAD | Design Safety Criteria for Industrial XRay Machines Used For NDT Application |
| 9:40 | 9:55 | CP184 | Subrata Pathak | Type Approval Testing of Co60 Based Indigenous Radiography Camera COCAM120 |
| | | | | for Industrial NDT Applications Regulatory Perspective |
| 9:55 | 10:10 | CP186 | Ganesh Bokam | Radiation Surveillance Procedure in Industrial Radiography |
| 10:10 | 10:25 | CP259 | Sasidharan Pillai Remakanthan | RADIATION SAFETY PRACTICES FOLLOWED IN RADIOGRAPHY OF LAUNCH VEHICLE |
| | | | | AND SATELLITE COMPONENTS |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 2C | | NDE for Concrete | Max Planck Hall |
|---------|-------|--------------|--------------------|----------------------------------------------------------------------------------|
| Chairma | an | Dr Ernst | : Niederleithinger | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT23 | Dr Abhijit Ganguli | Multimodal imaging methodologies for NDT of concrete structures |
| 9:25 | 9:40 | CP044 | Andrey BULAVINOV | True 3D Tomography New Approach for Tomographic Imaging and Evaluation of |
| | | | | Ultrasonic Concrete Testing Data |
| 9:40 | 9:55 | CP082 | Gopinandan DEY | Estimation of Degree of Moisture Saturation in Cement Concrete Using Electrical |
| | | | | Response at Low Radio Frequencies |
| 9:55 | 10:10 | CP060 | Prasanna KUMAR M | Finite Element Simulation of Ultrasonic Waves Interacting with a Corroding Rebar |
| | | | | in Concrete |
| 10:10 | 10:17 | CP305 | Rohan Sunil Gurav | Review of Non Destructive Evaluation Techniques in Civil Engineering |
| 10:17 | 10:24 | CP205 | Indrani Mukherjee | Phase Sensitive Detection of Extent of Corrosion Using Anisotropic |
| | | | | Magnetoresistive AMR sensor in Steel Reinforcing Bars Rebars |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 2D | | NDE Systems, Instrumentation & NDE4.0 | Michael Faraday Hall |
|---------|----------|--------------|---------------------------------------|--------------------------------------------------------------------------------|
| Chairm | Chairman | | babu Mulaveesala | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT09 | Viktor Klein | Robotic Inspection in Confined Spaces, from manual operation to a full digital |
| | | | | solution – feedback and experiences gained in commercial inspections |
| 9:25 | 9:50 | IT01 | C P Madhusudan | NDT Market Directions and Emerging Business Opportunities |
| 9:50 | 10:05 | CP338 | V Vinod | Equipment Reliability and Energy Conservation using Ultrasound Technology |
| 10:05 | 10:20 | CP152 | Lakshmi Atla Vijaya | A Thermographic System for Quantitative and Automated Subsurface Detail |
| | | | | Visualization |
| 10:20 | 10:35 | CP225 | Chris Udell | Making the Shift from CapEx to OpEx for Ultrasonic Flaw Detector Equipment |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 2 E | | NDE in Nuclear Industry | Lord Rayleigh Hall |
|---------|------------|--------------|--------------------------|------------------------------------------------------------------------------|
| Chairma | an | Dr BPC | Rao | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT19 | Dr Anish Kumar | Recent developments in advanced ultrasonic methodologies for in-service |
| | | | | inspection of PFBR |
| 9:25 | 9:40 | CP096 | Alka Kumari | Uncertainty in Hardness Measurement of hard faced FBR components |
| 9:40 | 9:55 | CP204 | G Kaliamoorthy | Development of Vacuum Cup to ensure leak tightness of Terminal pipeline weld |
| | | | | joints in Nuclear Projects |
| 9:55 | 10:10 | CP272 | Veera Shiva Beloor Reddy | Ultrasonic Imaging for Quality Evaluation of PHWR Fuel Bundle End plate to |
| | | | | Element Welds |
| 10:10 | 10:25 | CP325 | Mayank Chhapre | PreService Inspection of PHWRs in India |
| 10:25 | 10:32 | CP341 | K. S. S. Reddy | Assessment of Integrity of Thin Wall Nickel Tubes for LMFBR Steam Generator |
| | | | | Leak Detection Application |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

Industry Session - 2 (09:00-10:30 Hrs)

Exhibition Area

| NDE in Oil and Gas | | | | | | |
|---------------------|-----------------|--------------------------------------------------------|--|--|--|--|
| Name of the speaker | Organisation | Topic | | | | |
| Sh Ajay Bharaiya | RIL Oil and Gas | Challenges in NDE - Oil & Gas Industry Upstream sector | | | | |
| Sh N H Gosale | BPCL, Mumbai | Challenges in NDE - Refinery Assets | | | | |
| Sh V Sathyan | Kochi Refinery | Challenges in NDE - Refinery Assets | | | | |

10:30-11:00 Hrs

Tea Break



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

| Date: 6th December 2019 | Friday |
|-------------------------|--------|
| | |

| Plenary Session | n - II (11:00 - 12:15 Hrs) | Dr Vikram Sarabhai Hall | |
|-------------------------------|--------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------|
| Chairman 11:00 - 11:25 Hrs | Dr R J Pardikar Dr. Pierre Calmon | CEA France | Recent advances at CEA LIST for the development of Guided Waves SHM solutions: Techniques, Imaging and simulation |
| 11:25 - 11:50 Hrs | Sandeep Thakur | Airbus | NDI, A Big role to play! - The challenges faced by Aerospace Industries |
| 11:50 - 12:15 Hrs | Neil Harrap | TWI, UK | Use of Artificial Intelligence for Phased-Array Data Analysis |

Plenary Session on Women Empowerment (12:15 - 13:00 Hrs)

| 13:00 - 14:00 Hrs | Lunch |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| | |
| 14:00 - 15:00 Hrs (Open Session) | Poster Session - II at Exhibition Area Availability of Authors of Poster Presentation at Poster Area Quiz Competition Visit to Exhibition Area |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 3A | | NDE for Composites | C V Raman Hall |
|---------|----------|--------------|--------------------------|-------------------------------------------------------------------------------|
| Chairma | Chairman | | nivas | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 15:00 | 15:25 | IT07 | Dr M R Bhat | Experimental Investigations on NDE of Fiber Metal Hybrid Composites |
| 15:25 | 15:50 | IT02 | Dr Ivan Panteleev | Acoustic emission study of spatial-temporal damage evolution under uniaxial |
| | | | | tension of woven glass/epoxy laminates |
| 15:50 | 16:10 | CP342 | Joseph J Kakkassery | Accurate Determination of Acoustic Emission Source Location through Thickness |
| | | | | Direction in Composite Laminates by a Combination of Ultrasonic Data and |
| | | | | Theoretical Model |
| 16:10 | 16:25 | CP343 | Joseph J Kakkassery | Deploying Non Destructive monitored data with Fuzzy Logic Approach to Control |
| | | | | the Parameters for diminishing the Damage Area during Drilling Operation in |
| | | | | Composite Laminates |
| 16:25 | 16:32 | CP165 | Akhilendra Singh Gangwar | Mixing of Lamb waves at Delamination Defect in a Unidirectional GFRP Laminate |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 3B | | Radiography Inspection Technologies | W C Röntgen Hall |
|---------|-------|--------------|-------------------------------------|----------------------------------------------------------------------------|
| Chairma | ın | Dr Ume | sh Kumar | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 15:00 | 15:25 | IT30 | Dr Thomas Wenzel | X-RAY SOLUTIONS IN THE DIGITAL WORLD: New added values for the |
| | | | | manufacturing industry |
| 15:25 | 15:40 | CP188 | Vikash Behari | An Assessment of Radiographic Image Detector Technology |
| 15:40 | 15:55 | CP300 | Dhruv GAMDHA | Simulation Assisted Annotated XRay Image Data Generation for Deep Learning |
| | | | | Applications |
| 15:55 | 16:10 | CP313 | Changdar Samaresh | 1000 KM WELD INSPECTION ON PIPELINES IN THE OUTBACK WITH CR |
| 16:10 | 16:25 | CP233 | K Rasindh | Corrosion Measurement on Insulated Pipes |
| 16:25 | 16:32 | CP224 | Lubna Shadab Khan | Assessment of Sensitivity of Radioisotope based Radiometry Data during |
| | | | | Inspection of Large Sized Solid Rocket Motors |
| 16:32 | 16:39 | CP016 | Nitesh Keshri | Performance evaluation for Computed Radiography System in Aerospace |
| | | | | Industry |



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 3C | | NDE Sensor, System and Inspection Robotics | Max Planck Hall |
|---------|----------|--------------|--------------------------------------------|----------------------------------------------------------------------------------|
| Chairma | Chairman | | eric Cegla | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 15:00 | 15:25 | IT05 | Dr Prabhu Rajagopal | Inspection Robotics - CNDE-IITM experience and perspectives |
| 15:25 | 15:40 | CP010 | Arun Kumar Yadav | Development of Portable Wireless NonDestructive Crack Identification Method by |
| | | | | Using GMR Sensor Array for Overhead Crane Bridges |
| 15:40 | 15:55 | CP227 | Chris Udell | Improving ultrasonic inspector productivity with modern mobile technology |
| 15:55 | 16:10 | CP207 | Goravar SHIVAPPA | Automated analysis of eddy current images for crack detection using advanced |
| | | | | machine learning techniques A Review |
| 16:10 | 16:25 | CP170 | Deepak Rana | Experimental assessment of an RFID based wireless sensor for surface crack |
| | | | | detection and characterization on metal |
| 16:25 | 16:40 | CP115 | Debmalya Mukherjee | Development of Sectored External Pipeline Inspection Gauge for health monitoring |
| | | | | of industrial carbon steel pipelines |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 3D | | Electromagnetic NDE Methods - I | Michael Faraday Hall |
|---------|----------|--------------|---------------------------------|----------------------------------------------------------------------------------|
| Chairma | Chairman | | yan Sundaram | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 15:00 | 15:25 | IT03 | Uday Godbole | Evolution of Instrumentation in Eddy Current and Electromagnetic NDE systems |
| 15:25 | 15:40 | CP027 | Jitender YADAV | Eddy Current Array for Fuel Rod Inspections and Beyond From Manufacturing to |
| | | | | Endoflife Management |
| 15:40 | 15:55 | CP064 | Sumedha MOHARANA | Monitoring and Diagnosis of Thermal Expansion of Rails and Rail Joints Using |
| | | | | Piezoelectric Sensor for ElectroMechanical Impedance Technique |
| 15:55 | 16:10 | CP092 | Vijayachandrika THULASI | POD Studies of Axial and Radial Type Receiver Coils in Remote Field Eddy Current |
| | | | | Technique |
| 16:10 | 16:17 | CP183 | Ram Kumar | Eddy Current Testing for detecting Air Gaps in Sandwiched Tube Element of |
| | | | | Reactor ShutOff Rods |
| 16:17 | 16:24 | CP216 | Jacob Ashish Antony | THICKNESS ESTIMATION OF MARINE STRUCTURES USING AN ROV BASED PULSED |
| | | | | EDDY CURRENT TECHNIQUE |
| 16:24 | 16:31 | CP155 | Tarun Kumar Das | Reliability in Defect Classification and Characterization in Eddy Current Non |
| | | | | Destructive Evaluation |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 3E | | Advanced Ultrasonics | Lord Rayleigh Hall |
|---------|-------|--------------|----------------------|-----------------------------------------------------------------------------------|
| Chairm | an | Dr Sarm | ishtha Palit Sagar | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 15:00 | 15:25 | IT13 | Dr Bo Lan | Characterising polycrystalline materials with elastic waves |
| 15:25 | 15:40 | CP039 | R Dhayalan | Inspection of Misaligned Austenitic Stainless Steel Welds using Single Channel SH |
| | | | | wave EMATs |
| 15:40 | 15:55 | CP151 | A Thirumalaiselvi | Damage Assessment of Concrete Bridge Structures Using Ultrasonic Tomography |
| | | | | Technique |
| 15:55 | 16:10 | CP275 | Akash UPADHYAY | Hydrotreater REACDSS Inspection using Advanced NDE |
| 16:10 | 16:25 | CP168 | Tomas ZAVADIL | Detection of microstructure and stressstrain condition changes by ultrasonic |
| | | | | testing assessment of the detection sensitivity |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

Industry Session - 3 (15:00-16:30 Hrs)

Exhibition Area

| NDE in Concrete Structures | | | | |
|----------------------------------|--------------------|----------------------------------------------------------------------------|--|--|
| Name of the speaker Organisation | | Topic | | |
| Sh Chetan Raikar | StructWell. Mumbai | Challenges in NDE - Inspection of Civil structures for Human Occuptaion | | |
| Sh Ravi Ranjan | RIL. Jamnagar | Challenges in NDE - Inspection of Civil structures in Hydrocarbon industry | | |
| Sh Anirwan Sengupta | L&T Construction | Challenges in NDE - Inspection of Concrete Bridges | | |

16:30-17:00 Hrs

Tea Break



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 4A | | Ultrasonic Guided Wave | C V Raman Hall |
|---------|-------------|--------------|-----------------------------|---------------------------------------------------------------------------------|
| Chairma | Chairman Dr | | jit Ganguli | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 17:00 | 17:25 | IT28 | Dr Sauvik Banerjee | Ultrasonic guided waves for pitting corrosion assessment of reinforced concrete |
| | | | | structures using bondedpiezoelectric wafer transducers |
| 17:25 | 17:40 | CP120 | Balasubramaniam KALEESWARAN | Damage Assessment for a Sandwichlike Panel using Experimental and Numerical |
| | | | | Analysis of Guided Waves |
| 17:40 | 17:55 | CP345 | Sanjay Sharma | Model Assisted POD for Guided Wave-Based SHM of Growing Cracks |
| 17:55 | 18:10 | CP230 | Nived Suresh | Coded Excitation for Low Power Operation and Fast Acquisition in Guided Wave |
| | | | | Ultrasonic NonDestructive Evaluation |
| 18:10 | 18:17 | CP040 | Avijit Kumar Metya | Evaluation of Plastic Strain using Nonlinear Lamb Wave Mixing |
| 18:17 | 18:24 | CP226 | Sandeep Kumar | Improved Nonlinear Ultrasonic Detection of Imperfect Joint using Waveguide |
| | | | | Metamaterial Rod |
| 18:24 | 18:31 | CP285 | Dileep KOODALIL | Generation of Pure Guided Wave Modes Using Comb Transduction |
| 18:31 | 18:38 | CP354 | C Raju | Level Measurement at Higher Temperature Using Ultrasonic Guided Waves |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 4B | | Advanced NDE and Robotics | W C Röntgen Hall |
|---------|-------|--------------|---------------------------|---------------------------------------------------------------------------------|
| Chairm | an | Dr Thon | nas Gramberger | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 17:00 | 17:25 | IT22 | Dr Frederic Cegla | Low power EMATs, coded excitation and robotic inspection |
| 17:25 | 17:40 | CP038 | R Dhayalan | EMAT Phased array Inspection of Thick Austenitic Stainless Steel and Dissimilar |
| | | | | Metal Welds |
| 17:40 | 17:55 | CP113 | N.S.V.N Hanuman | Bicoherence Based Study of Nonlinear Intermodulation in Delaminated CFRP Plate |
| 17:55 | 18:10 | CP218 | Dharmveer SINGH | Industry 4.0 and NDT |
| 18:10 | 18:25 | CP340 | B Arun Sundaram | Studies on using FBG Sensor as a tool for Identifying Corrosion in Pipelines |
| 18:25 | 18:32 | CP308 | C T Manjunath | Ultrasonic Beam Steering in Bulk Medium using GRIN structures |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 4C | | Imaging in NDE | Max Planck Hall |
|---------|-------|--------------|----------------------|---------------------------------------------------------------------------------|
| Chairma | an | Dr Deba | shish Mishra | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 17:00 | 17:25 | IT12 | Krishna Mohan Reddy | Digital Imaging for Industry 4.0 – A Technical Perspective |
| 17:25 | 17:40 | CP030 | Nagarajan Srinivasan | New Methodologies for Strain Mapping at Microscale using Digital Image |
| | | | | Correlation |
| 17:40 | 17:55 | CP073 | Sai Reddy Chamanth | Prediction of Failure Process in GeoMaterial Using Finite Element based Digital |
| | | | | Image Correlation DIC Method |
| 17:55 | 18:10 | CP228 | Calum HOYLE | Ultrasonic Back Projection Imaging |
| 18:10 | 18:17 | CP083 | Sumedha MOHARANA | Pore Evaluation and Distribution in Cement Mortar Sample Using Digital Image |
| | | | | Processing |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 4D | | Quality Control, Quality Assurance & Safety | Michael Faraday Hall |
|---------------|-------------|-----------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Chairma | an | Dr Chris | tian Boller | |
| Start Time | End Time | Paper ID | Name of Speaker | Title of Paper |
| 17:00 | 17:25 | IT18 | Dr BPC Rao | Challenges for ensuring quality and safety in large engineering projects and ways to mitigate |
| 17:25 | 17:40 | CP291 | Pratik Ramchandra Deshpande | High Pressure Pneumatic Testing of Pressure Vessel |
| 17:40 | 17:55 | CP128 | Peter Amin | The Capabilities And Effectiveness Of Remote Visual Inspection Using UAV Unmanned Arial Vehicle |
| 17:55 | 18:10 | CP118 | Dinesh Gupta | Quality Control on Water Couplant for reliable immersion ultrasonic testing |
| 18:10 | 18:25 | CP042 | Rohit Kumar | Ultrasonic Examination of HardSurfacing Overlay in Valve Body Seating Area Using Focused Beam Immersion Technique |
| 18:25 | 18:32 | CP310 | Sangili Gunasekaran | GRE Pipe Manufacturing Defects Installation and NDE Requirements |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

| Session | 4E | | NDE Education & Training | Lord Rayleigh Hall |
|---------|-------|--------|--------------------------|-------------------------------------------------------------------------------|
| Chairma | an | Diwaka | r Joshi | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 17:00 | 17:25 | IT08 | Dr Christian Boller | High Level Based NDT Academic Education in Germany and its Potential Impact |
| | | | | on India |
| 17:25 | 17:40 | CP166 | Tomas ZAVADIL | ASME ANDE12020 news related to new version 2020 |
| 17:40 | 17:55 | CP167 | Tomas ZAVADIL | Proficiency assessment of NDT suppliers for corporations via inter laboratory |
| | | | | proficiency testing |
| 17:55 | 18:10 | CP058 | Sujit CHAKRAVARTY | Incorporation of Information Technology in The Curriculum in NDT Training to |
| | | | | Accomplish Reliability of Automated NDT Result to Detect Key Flaws |
| 18:10 | 18:25 | CP146 | Navita Gupta | Specifying the Specific for Effective NDT Trainings |
| | | | | |



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 6th December 2019 Friday

Industry Session - 4 (17:00-18:30 Hrs)

Exhibition Area

| NDE in Manufacturing and Metal Processing | | | | |
|-------------------------------------------|----------------------|--------------------------------------|--|--|
| Name of the speaker | Organisation | Topic | | |
| Sh Balamurugan | TataSteel | Challenges in NDE - Steel Plant | | |
| Sh P Thiyagarajan | TVS Sundaram Clayton | Challenges in NDE - Automobiles | | |
| Sh Satish Shinde | Bharat Forge | Challenges in NDE - Forging Industry | | |

18:00 - 19:00 Hrs Annual General Body Meeting (Only for members of ISNT)

19:00 Hrs onwards Gala Dinner



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 5A | | SHM & Condition Monitoring | C V Raman Hall |
|---------|-------|--------------|----------------------------|---------------------------------------------------------------------------------|
| Chairma | an | Dr Bo La | n | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT14 | Dr Sarmishtha Palit Sagar | Sensors and Devices for Non-destructive Evaluation and Structural Health |
| | | | | Monitoring @CSIR-NML |
| 9:25 | 9:40 | CP018 | D.Umapathi | Condition assessment of Sulphuric acid storage tanks Case study |
| 9:40 | 9:55 | CP142 | Shri Krishna Tripathi | NDE of Dissimilar and Thin Weld joint during Manufacture of Large Diameter |
| | | | | Inconel Bellows for FBR |
| 9:55 | 10:10 | CP174 | Ayush Gangwar | Failure Analysis of Attemperator Nozzle in Heat Recovery Steam Generator Units |
| 10:10 | 10:25 | CP199 | Suresh Periyannan | Ultrasonic Waveguide Technique for Temperature Measurement using T01 Wave |
| | | | | mode |
| 10:25 | 10:40 | CP147 | A.Ghosh | Development of a Smart Sensing System to Predict the Criticality of a Component |
| 10:40 | 10:55 | CP344 | Venkat N. Ramani | Vacuum and Helium Leak Testing Techniques Used for Very Large Size Vacuum |
| | | | | Chambers |
| 10:55 | 11:02 | CP015 | D.Umapathi | Condition assessment of Annular plates Piping Supports with Short Range |
| | | | | Ultrasonic Testing SRUT |
| 11:02 | 11:09 | CP348 | Nishank Soni | Furnace tubes Intelligent Pigging in a Refinery: A Case Study |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 5B | | Radiography Technologies | W C Röntgen Hall |
|----------|-------|------------------|--------------------------|-----------------------------------------------------------------------------------|
| Chairman | | Dr Thomas Wenzel | | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT29 | Dr Umesh Kumar | X-ray and Gamma-ray based Radiological Evaluation of Typical Industrial |
| | | | | Specimen for Defect Visualisation and Quality Assessment |
| 9:25 | 9:40 | CP019 | Saravanan T SARAVANAN | An Improved Quality Assessment of Fuel pin End plug Welds using Digital Xray |
| | | | | Radiography |
| 9:40 | 9:55 | CP109 | Girish N Namboodiri | Improvements in quality of Neutron Radiography images of pyro components used |
| | | | | in aerospace applications using image processing tools |
| 9:55 | 10:10 | CP153 | Ayaz Jhanorwala | Analysis of an Ambiguous Indication in Digital Radiography of Dissimilar Material |
| | | | | Weld Joint A Case Study |
| 10:10 | 10:25 | CP243 | Satya KORLIPARA | Fast Inline DR CT Solution for Light Metal Industry with Emphasis on Automotive |
| | | | | Applications |
| 10:25 | 10:40 | CP282 | S Keerthivasan | Radiography Testing Of Tube To Tube Sheet Joints in Vessel for Petrochemical |
| | | | | Industries |
| 10:40 | 10:47 | CP131 | Lakshminarayana Yenumula | Experimental Evaluation of Xray Digital Radiographic and Computed Tomographic |
| | | | | System using an Indirect FPD for Nondestructive Examination |



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 5C | | Thermography | Max Planck Hall |
|---------|-----------------|--------------|-------------------------|---------------------------------------------------------------------------------|
| Chairma | Chairman Dr Ole | | Plekhov | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 9:00 | 9:25 | IT15 | Dr Ravibabu Mulaveesala | Pulse Compression Favorable Coded Excitation Schemes for Thermal Non- |
| | | | | Destructive Testing and Evaluation of Solids |
| 9:25 | 9:40 | CP187 | M Menaka | Characterization of Vertical Cable Fires using Thermal Imaging |
| 9:40 | 9:55 | CP262 | M Jijith | Study of Tensile Instabilities Using Infrared Thermography |
| 9:55 | 10:10 | CP267 | S K Shama | Degradation Studies on Helicopter Tail Rotor Blades Sandwich Structure with |
| | | | | Infrared Thermal Imaging for Life Extension |
| 10:10 | 10:25 | CP284 | D Sharath | Signal Processing Approaches in Pulsed Thermography for Defect Characterization |
| | | | | in Stainless Steel Materials |
| 10:25 | 10:40 | CP149 | Gopi Tilak Vesala | Proper Orthogonal Decomposition based Coating Thickness Estimation in |
| | | | | Quadratic Frequency Modulated Thermal Wave Imaging |
| 10:40 | 10:55 | CP298 | Puthiyaveettil NITHIN | Crack detection real cracks in metalic sample at high temperature |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 5D | | Modeling and Simulation | Michael Faraday Hall |
|---------|----------|-------|--------------------------------|-----------------------------------------------------------------------------------|
| Chairma | Chairman | | e Calmon | |
| Start | End | Paper | Name of Speaker | Paper Title |
| Time | Time | ID | | |
| 9:00 | 9:15 | CP033 | Krishna C GHANAKOTA | Numerical Analysis of Partial Discharge Source Localization using Time of Arrival |
| | | | | Measurements and Nonlinear Least Squares Search |
| 9:15 | 9:30 | CP099 | Ranjani Jayaraman | Numerical Modeling of Remote Field Eddy Current Testing of Steam Generator |
| | | | | tubes |
| 9:30 | 9:45 | CP302 | Sivaramanivas Ramaswamy | Grain Size Distribution Effects on Ultrasonic Attenuation |
| 9:45 | 10:00 | CP080 | Aurovinda Kumar Mitra | Adiabatic Guided Wave Propagation Through a Honeycomb Composite Sandwich |
| | | | | Structure with Smoothly Varying Core Thickness |
| 10:00 | 10:15 | CP346 | K P Sruthi Krishna | Simulation Assisted Neural Network Model for Thermal Barrier Coating Thickness |
| | | | | Prediction |
| 10:15 | 10:22 | CP299 | Amar Kailas Borawake | Understanding Basic Phased Array Beam Computation and Inspection Simulation |
| | | | | with CIVA 2020 |
| 10:22 | 10:29 | CP017 | Bharath Chandra Thakkallapally | Defect Classification from Weld Radiography Images Using VGG19 Based |
| | | | | Convolutional Neural Network |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 5E | | Phased Array Ultrasonic | Lord Rayleigh Hall | |
|------------|-------|--------------|-------------------------|-------------------------------------------------------------------------------------|--|
| Chairman G | | Gavin D | Gavin Dao | | |
| Start | End | Paper | Name of Speaker | Title of Paper | |
| Time | Time | ID | | | |
| 9:00 | 9:25 | IT27 | Dr Paritosh Nanekar | Sound Beam Focusing using Phased Array - SAFT | |
| 9:25 | 9:40 | CP132 | Srinivas KUMAR | Real Time Total Focusing Method Applied To The Detection Of HTHA And HIC In | |
| | | | | Pressurized Vessels | |
| 9:40 | 9:55 | CP169 | Sumana | Parametric study on resolution achieved using FMCTFM based phased array | |
| | | | | ultrasonic imaging | |
| 9:55 | 10:10 | CP173 | S Kumar | Phased Array Ultrasonic Inspection of Dissimilar Weld Joints in Nuclear Facility by | |
| | | | | Experiment and Simulation | |
| 10:10 | 10:25 | CP221 | Y Siva | TFM Imaging Of Thick Section Composite Materials | |
| 10:25 | 10:40 | CP297 | Jeyaraman Satheesh | A Comparative Study of Plane Wave Imaging and Total Focusing in Imaging Defects | |
| 10:40 | 10:47 | CP234 | Thulsiram GANTALA | Numerical study of Phased Array ultrasonic beam parameters affecting the | |
| | | | | FMCTFM image resolution for defect characterization | |
| 10:47 | 10:54 | CP240 | Franã§Ois-CôMe BEAUPRé | Ultrasonic Phased Array Testing In lieu of Radiography Testing for Thin-Walled | |
| | | | | Heat Exchanger Welds An In the Field User Case | |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 6A | | In-service Inspection & Life Assessment | C V Raman Hall |
|---------|-------|-------------|-----------------------------------------|------------------------------------------------------------------------------|
| Chairma | an | Dr C K Mukł | nopadhyay | |
| Start | End | Paper ID | Name of Speaker | Title of Paper |
| Time | Time | | | |
| 11:30 | 11:55 | IT11 | Dr Oleg Plekhov | Nondestructive Evaluation of Service Life of Metals Materials and Structures |
| | | | | Based on Infrared Thermography |
| 11:55 | 12:20 | LT (CP350) | Hari Kishore Maddi | Advanced NDT techniques for in Service high Temperature applications |
| | | | | |
| 12:20 | 12:35 | CP009 | Muthu GANESAN | Process Control in Magnetic Particle Testing |
| 12:35 | 12:50 | CP144 | Hussain Ebrahim Vasadwala | Inspection of Ammonia Synthesis Converter |
| 12:50 | 13:05 | CP175 | Govind Kumar Sharma | InService Inspection of Fast Breeder Test Reactor Components |
| 13:05 | 13:20 | CP241 | Franã§Ois-CôMe BEAUPRé | InService Corrosion MappingChallenges for the Industry |
| | | | | |
| 13:20 | 13:27 | CP029 | Girish Maruti Shejale | Replica Metallography Case Study A NDT Technique for Life Assessment of Gas |
| | | | | Turbine Wheel |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 6B | | Computed Tomography | W C Röntgen Hall |
|---------|----------|--------------|---------------------------------|-----------------------------------------------------------------------------------|
| Chairma | Chairman | | sh Kumar | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 11:30 | 11:55 | IT21 | Dr Debashish Mishra | Industrial Volumetric CT Trends and Challenges |
| 11:55 | 12:10 | CP156 | Sharan Srinivas Jagathrakshakan | A Comparative Study of Industrial XRay CT Reconstruction Algorithms Driven by |
| | | | | GPU Infrastructure |
| 12:10 | 12:25 | CP242 | Shashi Shekhar NAGABHUSHANA | Extending CT Applications Large Objects ROI Scanning and Quantitative CT |
| 12:25 | 12:40 | CP296 | Dr. Daniel Shedlock | Application Tools for Improvements and Enhancements of 2D Radiographs and 3D |
| | | | | ConeBeam Computed Tomography CBCT |
| 12:40 | 12:55 | CP069 | Manu Joseph | Computed Tomography CT is an Asset to ensure the Quality and Reliability of Parts |
| | | | | in Aerospace Applications |
| 12:55 | 13:02 | CP198 | Anis Fatima | 3D Characterization of Ore Mineral Phases Using High Resolution Synchrotron |
| | | | | Microcomputed Tomography CT |
| 13:02 | 13:09 | CP177 | R Ramar | Assessment of Performance Gammaray CT System Based on the Image Quality |
| 13:09 | 13:16 | CP210 | Rajesh ACHARYA | Scheme for Gamma and XRay Based Computed Tomography Scanning |
| 13:16 | 13:23 | CP211 | Rajesh ACHARYA | Software Application for Gamma Ray Computed Tomography Data Acquisition |
| | | | | with Discrete Detectors |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 6C | | NDE in Power Sector | Max Planck Hall |
|---------------|-------------|-------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairma | ın | Dr R J Pa | ardikar | |
| Start Time | End Time | Paper ID | Name of Speaker | Title of Paper |
| 11:30 | | IT31 | M K Asthana | Challenges in Application of Advanced NDE Techniques such as PAUT, TOFD, Digital RT in examination of site welded joints in High Pressure Piping & Steam Generators of thermal power plants based on Super Critical Steam, & Ultra Super Critical Steam Technology |
| 11:55 | 12:10 | CP093 | M Janardhana | Nondestructive test for Detection of Magnetite deposits in Stainless steel tube bends of Steam Generating stations |
| 12:10 | 12:25 | CP273 | Tarla MALLIKHARJUNA RAO | Applications Of Thermography For Condition Monitoring Of Power Plant Equipment CPRI Experience |
| 12:25 | 12:40 | CP189 | Kishore Kumar Gulipilli | Laser scan of Butterfly valve for Corrosion Damage Assessment of Hydropower Plant |
| 12:40 | 12:47 | CP095 | Venkateswararao MUSHINI | Insitu Metallography a NDE Tool for Remaining Life Assessment of High Temperature Thick Section Boiler Components |
| 12:47 | 12:54 | CP190 | Kishore Kumar Gulipilli | Non Destructive Testing and Evaluation of Electrical Steels |
| 12:54 | 13:01 | CP232 | M Janardhana | NDT Inspection of Boiler Riffle Tubes and Laboratory Analysis |



Organised by Indian Society for Non-Destructive Testing (ISNT)

Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 6D | | Electromagnetic NDE Methods - II | Michael Faraday Hall |
|----------|-------|--------------|----------------------------------|----------------------------------------------------------------------------------|
| Chairman | | Uday Godbole | | |
| Start | End | Paper ID | Name of Speaker | Title of Paper |
| Time | Time | | | |
| 11:30 | 11:55 | LT(CP172) | A K Das | Nondestructive Evaluation of Post Weld Heat Treatment Quality of |
| | | | | Ferromagnetic Steel P91 Weld by Magnetic Coercive Force MCF Measurement |
| 11:55 | 12:10 | CP238 | Tien Shung Chai Dennis | Detecting Stress Corrosion Cracking with Eddy Current Array Technology |
| 12:10 | 12:25 | CP266 | Chandra Sekhar Angani | Detection of Cracks in Stainless Steel Structures Using Transient Eddy Current |
| | | | | Oscillations Method |
| 12:25 | 12:40 | CP081 | Manali Nandy | Visual Detection of Defects in Ferromagnetic Steels Using Magnetic Nano |
| | | | | emulsions |
| 12:40 | 12:55 | CP171 | Indrani Mukherjee | Eddy Current Based Non Invasive Sensing of Extent of Corrosion in Steel |
| | | | | Reinforcing Bars Rebars |
| 12:55 | 13:10 | CP119 | P Mahesh Raja | Design of an eddy current array probe for non destructive testing of thin walled |
| | | | | stainless steel tubes |



Organised by Indian Society for Non-Destructive Testing (ISNT) Theme
eNDEavours from
detection to prediction

Clarks Exotica Convention Resorts & Spa, Bengaluru

Date: 7th December 2019 Saturday

| Session | 6E | | TOFD and Phased Array Ultrasonics | Lord Rayleigh Hall |
|----------|-------|--------------|-----------------------------------|----------------------------------------------------------------------------------|
| Chairman | | Dr Parit | osh Nanekar | |
| Start | End | Paper | Name of Speaker | Title of Paper |
| Time | Time | ID | | |
| 11:30 | 11:55 | LT | Cyril Thibault | Adaptive Total Focusing Method for Complex Surface Geometry with Linear and |
| | | (349) | | Matrix Phased Arrays |
| 11:55 | 12:10 | CP066 | Manu Joseph | Phased Array Ultrasonic Testing PAUT is an apt tool for reliable integrity |
| | | | | assessment of aerospace parts and systems |
| 12:10 | 12:25 | CP110 | Abhishek SAINI | Improved 3D Ultrasonic Imaging of Surface Breaking Cracks by Linear Phased Array |
| 12:25 | 12:40 | CP347 | Krishna Bhuta | PAUT Paint Brush Application |
| 12:40 | 12:55 | CP235 | Siva Y | Effect of Probe Parameters on Defect Detectability Using TOFD Technique on Thin |
| | | | | Wall Butt Weld Joints |
| 12:55 | 13:10 | CP088 | S Anandamurugan | Study Of Ultrasonic Weld Application using Total Focusing Method |
| 13:10 | 13:25 | CP239 | Tien Shung Chai Dennis | Building TFM Procedures for Challenging Inspections such as ERW hook crack Girth |
| | | | | Welds HTHA and others |

| 13:30 - 15:00 Hrs | Lunch |
|-------------------|---------------------------------------------|
| 15:00 - 15:20 Hrs | Panel Discussion |
| 15:20 - 16:30 Hrs | Valedictory Function and Award Distribution |
| 16:30 - 17:00 Hrs | Tea |