AM.4
Materials Characterization

Tuesday, June 16th, 2026 – Room 11.A1 (all day)
Wednesday, June 17th, 2026 – Room 11.A1 (all day)

ID 106, *Optimizing the Use of Developer "a", "b", "c" and "d" in Fluorescent Penetrant Testing: Performance, Limits and Critical Issues in the Aeronautical Sector*, Massimo Capriolo, Joseph De Francesco, Gaetano Buonocore, Andrea Macchi, Davide Spinozzi, A. Girolami, Fulvio Radaelli

ID 122, *Parameters of the Magnetic Hysteresis Loop as Information Features for Non-Destructive Evaluation of the Mechanical Characteristics and Hydrogen Concentration of Ferrous Steels,* Valentyn Uchanin, Giuseppe Nardoni, Andriy Syrotyuk, Orest Ostash, Vitaliy Ovsyanykov

ID 170, *On the Use of OCLC Emats to Detect Notches and Cracks in Metal Plates*, Matthew Morrissey, Paddy Caskey, Pouyan Khalili, Frederic Cegla

ID 215, *Challenges in Ultrasonic NDT/NDE of Small-Scale Structural Defects in Metal Pipelines of the Energy Sector*, Renaldas Raišutis, Vykintas Samaitis, Audrius Stravinskas, Egidijus Žukauskas, Vaidotas Cicėnas

ID 236, *Suitability of Different Non-Destructive Techniques for Physical and Mechanical Characterization of the Wood used in Construction*, Narintsoa Ranaivomanana, Jean-Paul Balayssac, Bhanu Kumar Srirangarajuaplli

ID 256, *Electrical Resistance-Based Fatigue Damage Evaluation in Full Forward Rod Extruded 16mncrs5 Steel*, Lukas Maximilian Sauer, Lars Andree Lingnau, Frank Walther

ID 285, *Laser Ultrasound Combined with Image-Based Analysis for Simultaneous Evaluation of Sound Velocity and Thickness*, Hongjun Sun, Keita Ozaki

ID 300, *Ultrasonic Probes for Non-Destructive Testing Without Lead-Based Piezoceramics?*, Andreas Mück, Mark Achtenberg, Martin Fuchs

ID 334, *Spatially Resolved Acoustic Spectroscopy: from Hard to Soft Materials Elastic Characterisation*, Rafael Fuentes-Dominguez, Samuel Karet, Salvatore La Cavera III, Alan McIntyre, Richard J. Smith

ID 343, *Tomographic Reconstruction of the Subsurface Grain Structures in Polycrystalline Materials using Full-Waveform Inversion*, Fangyuan Wan, Jie Zhang, Anthony J. Mulholland

ID 345, *Application of NDT Magnetic Property (Coercivity) Measuring Method for Indicating Mechanical State of Steel after Induction Pipe Bending*, Roman Solomakha, Connor O'Shea, Hennadii Bezlyudko

ID 360, *Detecting α'-Martensite in 316L Austenitic Steels with Magnetic NDT Technologies*, Hélène Petitpré, Yves Armand Tene Deffo, Baptiste Vindolet, Daniella Guedes-Sales, Kerian Wegerhoff, Benjamin Ducharne, Thomas Hingant

ID 367, *CT-Based Investigation of Defect Evolution in Polymeric Components under Cyclic Mechanical and Hydrogen Pressure Loading*, Sarah Heupl, Julia Thalhammer, Bernice Mills, Menon Nalini, April Nissen, Johann Kastner

ID 383, *Effect of Plastic Strain and Reloading Stress on the Acoustic Birefringence of a Martensitic Steel*, Zakariae Maazaz, Fabien Lefevre

ID 389, *Non-Destructive Orientation and Elasticity Determination of the Gibeon Meteorite using Spatially Resolved Acoustic Spectroscopy*, Wenqi Li, Matt Clark, Richard J. Smith

ID 420, *Resonant Ultrasound Characterization of Materials in the ECOBALLIFE Project*, Florian Le Bourdais, Guillemette Ribay, Marie-Bénédicte Jacques

ID 446, *In-Situ Electromagnetic Monitoring of Annealing Behaviour in Interstitial-Free Steel using a High-Temperature Furnace Rig*, Lei (Frank) Zhou, Mohsen A. Jolfaei, John Wilson, Carl Slater, Claire Davis, Anthony Peyton

ID 488, *Characterization of Microstructured Steels: from Bulk Waves to Guided Waves Radiation*, Jordan Barras, Vincent Dorval, Nicolas Leymarie, Alexandre Imperiale, Edouard Demaldent

ID 501, *Analysis of Chemical Composition Effect on Electromagnetic Sensor Response during Steel Phase Transformation on the Run Out Table*, Esra Kaderli, Lei Zhou, Carl Slater, Ian Gibson, Claire Davis

ID 512, *High-Resolution 3D Ultrasonic Imaging of Defects with Various Shapes using Piezoelectric and Laser Ultrasonic System (PLUS)*, Yoshikazu Ohara, Yuto Fujikawa, Taiyo Sugi, Atsuhiro Hibi, Mitsuru Miyamoto, Takeyuki Okamura, Toshiyuki Suzuma

ID 524, *Simultaneous Estimation of Multiple Parameters of Metallic Samples via Eddy Current Testing*, Alessandro Sardellitti, Vincenzo Mottola, Filippo Milano, Luigi Ferrigno, Antonello Tamburrino, Marco Laracca

ID 544, *Ceramic Coil Design for High Temperature EM Measurements in a Differential Scanning Calorimeter*, John Wilson, Mohsen Jolfaei, Adam Fletcher, Lei Zhou, Carl Slater, Claire Davis, Anthony Peyton

ID 556, *Enhancing Commercial Differential Scanning Calorimetry (DSC) with Embedded Electromagnetic Sensing for In-Situ Monitoring of Tempering Martensite*, Mohsen A. Jolfaei, John W. Wilson, Adam D. Fletcher, Frank Zhou, Carl Slater, Claire Davis, Anthony J. Peyton

ID 655, *Ultrasonic Velocity–Based Non-Destructive Characterization of Heat-Treated Additively Manufactured 18Ni300 Maraging Steel*, Ibrahim Aydin, C. Hakan Gür

ID 781, *Understanding the Effects of Crystallographic Texture and Pore Morphology on Ultrasound Wave Propagation in Laser Powder Bed Fused 316L Stainless-Steel*, Antonio Brozicevic, Paul Hooper, Bo Lan

ID 801, *Magnetic Hysteresis Parameters as Non-Destructive Indicators of Microstructure in DP600 Steel after Controlled Thermal Cycles*, Ane Martinez-de-Guerenũ, Mikel Cuenca-Ariza, Iosu Aramendi, Amaia Iza-Mendia, Denis Jorge-Badiola

ID 819, *FPGA-Based Non-Destructive Measurement System for Fast and Accurate Estimation of Thickness and Electrical Conductivity of Metallic Plates*, Simone Palazzo, Vincenzo Mottola, Giovanni Canale Parola, Luigi Ferrigno, Alessandro Sardellitti, Antonello Tamburrino, Francesco Velardi, Annunziata Sanseverino

ID 860, *Acoustic Emission Monitoring of Hydration Processes in Cementitious Suspensions and Systems*, Eleni Korda, Dimitrios Aggelis, John L. Provis

ID 890, *Buried Corrosion Imaging in Magnetic Plates by Electrical Resistance Tomography*, Vincenzo Mottola, Joseph Corcoran, Luigi Ferrigno, Peter B. Nagy, Antonello Tamburrino

ID 922, *Monitoring and Control of Hydration Heat Development in Massive Concrete Pours*, Carol Li Calzi

ID 937, *Acoustic Emission Characteristics of Damage Mechanisms in Carbon Fiber Reinforced Polymer Materials*, Keuntae Park, Sangwoo Kim

AM.1
Artificial Intelligence and Machine Learning

Tuesday, June 16th, 2026 – Room 11.A2 (all day)

ID102, *AI-Powered Defect Recognition System for Magnetic Particle Inspection: Applications and Solutions in Automotive Component Testing*, Yang-Chieh Lin, Wei-Chia Cheng, Tsung-Chi Tang, Posheng Chiang

ID126, *Quantum k-Nearest Neighbors for Accelerated and Robust Damage Detection in Railway Bridge Structural Health Monitoring: A Case Study on KW51 Bridge*, Haniye Ghafouri Rouzbahani, Mohammad Omidi Mamaghani, Ferdinand Pospischil

ID211, *Modeling and Reconstruction of Air-Coupled Ultrasonic Signals via CNNs*, Héctor Calás

ID239, *Advancement of Eddy Current Testing for Ferromagnetic Heat Exchanger Tubes using a Multi-Coil Probe and AI*, Sakura Handa, Kazuaki Yoshie, Kazuki Karimai, Yoshihisa Maruyama

ID253, *Towards Fully Automated Interpretation of Ultrasonic NDE Data for Carbon Fibre Reinforced Polymers using Multi-Model Machine Learning Frameworks*, Ehsan Mohseni, Vedran Tunukovic, Shaun McKnight, Gareth Pierce, Gordon Dobie, Charles MacLeod, Randika K.W Vithanage, Sandy Cochran, Tom O'Hare

ID274, *Generative AI in NDE: Connecting Human Expertise and Data for Enhanced Inspection Support*, Marco Induti, Carlo Romito, Stefano Cipolla, Oliver von Trzebiatowski, P. Goyal

ID318, *Analyses of Advanced Bio-Composites using Acoustic Emission and Machine Learning*, Markku Tiitta, Valtteri Tiitta, Wen Jiang, Kirsi Immonen, Faisan Asad, Reijo Lappalainen, Laura Tomppo

ID388, *An Explainable and Standards-Aware AI Framework for Automated Ultrasonic Inspection using Volumetric Learning, Compliance Encoding, and RAG-Based Reporting*, Vishwesh Vishwesh, David Böttger

ID441, *Real-Time Stiffness Characterization of Complex-Shaped Metal Parts by Vibrational Testing and Machine Learning*, Adil Han Orta, Sylvain Chabanet, Mathias Kersemans

ID491, *Assisted Data Analysis for Nondestructive Evaluation*, Eric Lindgren

ID566, *Fostering Collaboration and Enabling Development in AI4NDE: Available Opportunities and Activities*, Thiago Seuaciuc Osorio

ID715, *YOLO-Based Detection of Small Inclusions in Radiographies of Composite Parts*, Ilyas El Younousi, Anne-Laure Mealier, Axel Lecoeuvre, Nicolas Griselin

ID753, *AI-Enhanced X-Ray Tomography for Quantitative Crack Characterization in Industrial Materials*, Sofiane Terzi, Duy Nguyen, Dajla Neffati, Awen Autret, Barbara Fayard

ID762, *Deep Learning-Based Spatial Coherence Estimation for Ultrasonic NDT*, Gabriel O. Vasconcellos, Matheus F. Dário, Tatiana de A. Prado, Daniel R. Pipa

ID768, *Machine Learning–Driven Flaw Detection for Ultrasonic Pipe Inspections with Acoustic Lens*, Thiago E. Kalid, André E. Lazzaretti, Tatiana de A. Prado, Gustavo P. Pires, Daniel R. Pipa, Thiago A. R. Passarin

ID867, *Edge AI Enabled In-Situ Multi-Modal NDE Framework using Computer Vision and Eddy Current Testing*, Lei Peng, Zhibo Zhang, Na Zhang, Yiming Deng

ID878, *Towards Training-Free Surface Detection and Characterization for Metal Addictive Manufacturing with Vision Foundation Model*, Chaoyu Dong, Hwee Ping Ng, Fang Cheng, Andrew Malcolm

ID889, *AI for Manual Ultrasonic Inspection*, Oskari Jessen-Juhler, Iikka Virkkunen, Thiago Seuaciuc-Osorio

SS2
Human Centered

Tuesday, June 16th, 2026 – Room 11.B1 (morning)

ID323, *Augmented Reality in Aircraft Maintenance*, Judith Hartfill, Rahel Louise Schmied-Kowarzik, Andreas Wilken, Lina Kaschub, Rebecca Rodeck, Gerko Wende

ID332, *A Human-Centric Framework for Incremental and Active Learning in AI-Based Non-Destructive Testing*, Julen Mendikute, Jose Luis Lanzagorta, Irati Sanchez, Iratxe Aizpurua, Irantzu Ermina

ID459, *Personnel Qualification and Ethical Challenges in AI-Driven Automated Decision-Making*, David Gilbert

ID567, *Human Factors and AI for NDE*, Thiago Seuaciuc Osorio

ID599, *Augmenting NDT: How XR Supports Data Acquisition, Interpretation, and Reporting*, Daniel Conniffe, Ruoxuan Zhu, Adam Fletcher, Anthony Peyton, Jim Skelton

ID709, *Recommendations for the Human-Centred Implementation and Acceptance of Advanced Technologies in Non-Destructive Testing*, Marija Bertovic, Sophie Berretta, Christiane Trela

ID779, *Remotely Operated Inspection of Complex Surfaces without Programming using Flexible Wedges*, Jean-Philippe Merle, Jérôme Poguet

ID780, *Traceability of Manual NDT Scanning not using Encoded Scanners*, Jean-Philippe Merle, Jérôme Poguet

SS7
Railway

Tuesday, June 16th, 2026 – Room 11.B1 (afternoon)
Wednesday, June 17th, 2026 – Room 11.B1 (all day)

ID117, *Evaluation of Alternative Broken Rail Detection Systems*, Anish Poudel, Survesh Shrestha

ID148, *Automated Maintenance for Rolling Stock - Safety and Reliability of Rail Wheels Due to Innovative NDT Technology and Robotics*, Daniel Werner, Frank Kahmann, Thomas Wuerschig, Andreas Franzen, Frank Henrix

ID242, *Advanced Ultrasonic Testing of Hollow Railway Axles by the Phased Array Technique*, Michele Carboni, Massimo Carminati, Pierluigi Donzelli, Riccardo Galvani, Lucio Rota

ID252, *Digital Eyes on the Axles and Wheels: Remote and Intelligent Magnetic Particle Inspection*, Simona Vettese, Michele Burei, Domenico Paladino

ID277, *Air-Coupled Impact-Echo for Non-Destructive Testing of Prestressed Concrete Sleepers*, Christoph Strangfeld, David Ringeloth, Moritz Sieber

ID295, *A Diffusion-Based Unsupervised Framework for Wheelset Ultrasonic Defect Detection*, Qian Zhang, Fuben Zhang, Haoyu Ding, Ai Wang, Jianping Peng, Xiaorong Gao, Kai Yang

ID314, *Self-Supervised Anomaly Detection in Extremely Imbalanced Ultrasonic Railway Data: An Adaptive Triplet-Center Approach*, Huiying Li, Timo Hartmann

ID354, *NDT Methods for Crack Detection In Prestressed Concrete Railroad Sleepers*, Susanne Hillmann, Martin Friese, Jan Gräfing, Gisbert Berger, Christoph Strangfeld, David Ringeloth, Aurimas Pukenas, Peter Krüger, Dirk Hofmann, Selina Vaculik, Mario Aguilar, Christian Linden

ID365, *Research on Steel Rail Surface Rolling Defect Detection Using the Fusion of Inductive Thermography and Optical Imaging Technologies*, Kang Tian, Liaoyu Kou, Bo Zhao, Xiaorong Gao, Jianping Peng

ID419, *Efficient Evaluation of Ultrasonic Phased Array Performance with Applications to Limited-Firing Scenarios*, Nachman Malkiel, Anthony J. Croxford, Paul D. Wilcox

ID442, *Pasawis – The innovative Wheel Set Inspection System*, Stefan Caspary, Christian Conrad, Angélique Raude

ID507, *Experimental Evaluation of Magnetic Flux Leakage for Railway Non-Destructive Testing*, Alessandro Paolo Daga, Luigi Garibaldi, Aldo Canova

ID533, *Non-Destructive Residual Stress Measurement in Railway Wheels by Using Ultrasound*, Matteo Rosafio, Damiano Sallemi, Mauro Del Giorgio, Tiziano Buzzella, Marco Sarti

ID578, *Evaluation of Eddy Current Testing Capabilities for Detecting Surface Flaws in Axles at the Manufacturing Stage*, Giovanni Corti, Claudio Rocchi, Fabio Turla, Francois Vicat

ID609, *From Magnetic Particles to Eddy Current Inspection: How to Transform Surface Inspection*, Ondřej Doubek

ID611, *Fully Automated Ultrasonic Testing of Bearing Rings for Railway Applications*, Petr Žbánek

ID640, *Split-D Differential Eddy Current Probes for Evaluating Rolling Contact Fatigue Defects in Railway Rails*, Leandro Serraiocco, Javier Fava, Ramiro Gonzalez, Benicio Dominguez, Joaquin Rolla Napal, Marta Ruch

ID687, *New Concepts for Automated Railway Track Inspection*, Sven Lutter, Gerald Schneibel

ID690, *A Comprehensive Technical Review of the Non-Destructive Methods for Rail Inspection*, Nasim Fallahi, Luigi Garibaldi

ID713, *UT Testing of Hollow Railway Axles - Presentation of the Boreaxle Machine BAT4*, Damiano Sallemi, Matteo Rosafio, Mauro Del Giorgio, Tiziano Buzzella, Marco Sarti

ID745, *Proactive Technical Monitoring in Local Public Transport Companies: Practices and Future Outlooks @ Azienda Trasporti Milanesi*, Giuseppe Cassinelli, Andrea Simino, Jihad Karaki

ID895, *Integrated NDT Approaches for Characterizing Stud-Type Rail Defects: a Comparative Case Study*, Meirbek Mussatayev, Ruby Kempka, Roger Lewis, Ian Sinclair, Fernando Alvarez Borges, Mohammad Ali Fakih

SS6
Advances in inspection and NDT for assessment and maintenance of bridge structures

Tuesday, June 16th, 2026 – Room 11.B2 (all day)

ID134, *Potential of Muon Tomography in Bridge Investigations*, Ernst Niederleithinger

ID208, *Enhanced SAFT Imaging of Concrete by Correlation-Based Reflector Classification*, Andrey Bulavinov, Dmitriy Dolmatov, Viktor Shevaldykin, Roman Pinchuk, Andrey Samokrutov, Sergey Nazhestkin, Arezoo Imani

ID220, *Research on Tension Pulsed Eddy Current Estimation Method for Steel Strand Using Analytical Model*, WenLong Zhang, XinJun Wu, LingSong He

ID270, *Evaluation of Post-Tensioned Bridges with NDT Techniques*, Guy Rapaport

ID650, *Static and Dynamic Characterization of the Historic Truss Bridge over the Po River at Becca: A Comparative Analysis with the Results of the 1980s Investigation Campaign*, Calogero Pio Di Vita, Giorgia Campori, Diego Esposito, Daniele Insana, Antonio Mucciarone, Luca Ranedda

ID656, *Analysis of Degradation Mechanisms in the Deck Slab of the Lussari Viaduct Using Non-Destructive Testing: a Ground Penetrating Radar Approach*, Giorgia Campori, Calogero Pio Di Vita, Diego Esposito, Daniele Insana, Antonio Mucciarone, Anna Marta Pozzi, Luca Ranedda, Davide Testa

ID676, *Residual Prestress in Post-Tensioned Concrete Structures: Review, Laboratory and In-Situ Experiments*, Antonio Mucciarone, Giorgia Campori, Calogero Pio Di Vita, Diego Esposito, Egidio Lofrano, Daniele Insana, Luca Ranedda

ID677, *Diagnostic Approaches for Evaluating Structural Improvement Interventions on Arch Bridges - Case study "Pasquarella" Bridge*, Diego Esposito, Giorgia Campori, Calogero Pio Di Vita, Daniele Insana, Antonio Mucciarone, Luca Ranedda

ID754, *Investigation of the Changes in the Mechanical Properties of Chloroprene Rubber (CR) under Thermal Oxidation Aging by Ultrasonic Techniques*, Pincheng Su, Violaine Tinard, Pierre François, Christophe Fond

ID773, *Assessment of Void Volume in Post-Tensiong Ducts Via the Vacuometric Technique*, Roberto Felicetti

ID814, *Reconstruction of Prestressing and Shear Reinforcement Using the Non-Destructive GPR Technique – Application to a Gerber Beam Structure*, Daniele Insana, Giorgia Campori, Calogero Pio Di Vita, Diego Esposito, Antonio Mucciarone, Luca Ranedda

ID858, *Fault Detection Algorithm Implementation for Distributed Sensor Networks*, Wilgo Moreira Nunes, Pedro M. Ferreira, João dos Reis

ID863, *Model-Assisted Ultrasound Computed Tomography for PT Duct Inspections in Concrete Bridges*, David Sollberger, Fabian Lindner, Lion Krischer, Chris Udell, Christian Boehm

ID897, *Inspection Data Based Rapid Assessment of Corrosion in Reinforced Concrete Bridges*, Ali Siddique, Alejandro Pérez Caldentey, Antonio Bilotta

ID916, *Deep Learning Based Multiclass Surface Damage Detection for RC Bridge Inspection using UAV Imagery*, Ali Siddique, Vittorio Prodromo, Antonio Bilotta

ID932, *An Integrated Investigation Framework for Knowledge Enhancement in the Safety Assessment of a Historical RC Gerber Half-Joint Bridge*, Andrea Gennaro, Nicola Molon, Simone Ravasini, Marco Carlo Rampini, Nzeeh Roumia, Elisa Saler, Beatrice Belletti, Marco Di Prisco, Claudio Mazzotti, Gilberto Artioli, Antonio Bilotta, Francesca da Porto

AM.6
Numerical modeling

Tuesday, June 16th, 2026 – Room 11.C1 (all day)

ID201, *Numerical Evaluation of High-Resolution Ultrasonic Imaging Algorithms for NDT Applications*, Mario Certo

ID222, *Numerical Approach in the Design of Magnetic Particle Inspection Devices*, Michele La Bianca, Fontò Eleonora, Luca Giaccone, Fabio Freschi, Aldo Canova

ID288, *Efficient Local Finite Element Simulation of Ultrasonic NDE with Application to Inspection Qualification*, Paul D. Wilcox, Nachman Malkiel, Anthony J. Croxford

ID335, *Random Walk Modelling of Hydrogen-induced Defects for Ultrasonic Response Analysis*, Liuyu Chang, Bruce Drinkwater, Jie Zhang

ID398, *Modelling and Simulation Use in X-ray Computed Tomography for NDT*, Marius Costin, Victor Bussy, Julie Escoda, Hermine Lemaire, Jitendra Singh Rathore, Adrien Stolidi, Anthony Touron

ID429, *Modelling Study of Surface Treatment on Eddy Current Testing: Influence of Geometry*, Edouard Demaldent, Audrey Vigneron, Olivier Ghibaudo, Alexandre Corazza, Julien Banchet

ID476, *Ultrasonic Wave Propagation Analyses in Cast Stainless Steel using Solidification Grain Structure Models Predicted by Cellular Automaton Approach*, Masaki Nagai, Yukinobu Natsume, Shan Lin, Kazuyuki Nakahata

ID496, *Consolidating Reliability of Guided Wave SHM through Simulation: Application on a Bolted Panel with Static Load*, Edouard Demaldent, Alexandre Imperiale, Arnaud Recoquillay, Pierre Calmon, Aurélien Rautureau, Paul Swindell

ID618, *Optimising Synthetic Data for Machine Learning Applications to Surface-Breaking Thermal Fatigue Cracks*, James Gaffney, Thomas Beckingham, Daniel Colquitt, Will Daniels, Stewart Haslinger

ID637, *Benefits of New Finite Elements Models Available for Ultrasonic NDE Simulations*, Fabrice Fourcher, Jerome Dudous, Nicolas Leymarie, Edouard Demaldent, Stéphane Le Berre, Edward Ginzel

ID682, *Application of Full Waveform Inversion to Ultrasonic Data*, Alina Suchkova, Ernst Niederleithinger

ID733, *Complex Surfaces Profilometry by Splines Estimation*, Janice Estelle Ayisah, Nans Laroche, Clément Huneau, Sébastien Bourguignon, Jérôme Idier, Ewen Carcreff

ID763, *mini-auspex: a Python Library for Ultrasonic Data Import, Post-Processing and Imaging*, Giovanni A. Guarneri, Vinicius Pegorini, Daniel R. Pipa, Thiago E. Kalid, Tatiana de A. Prado, Gustavo P. Pires, Thiago A. R. Passarin

ID765, *Modeling and Removal of Electronic Crosstalk Effects in Ultrasound Signals via Deconvolution*, Fabio Z. Y. Wang, Tatiana de A. Prado, Thiago E. Kalid, Gustavo P. Pires, Glauber Brante, Daniel R. Pipa, Thiago A. R. Passarin

ID770, *Vibration Analysis of a Structure with Plan Irregularity Using the Frequency Domain Decomposition Method*, Kevin Ortiz, Manuel Aspilcueta, Licelly Costilla

ID782, *Computational Modeling Parameters to Consider when Reproducing GPR Data as it Applies to Bridge Decks*, Nicole Martino, Ken Maser, Ralf Birken, Camila Wendland

ID855, *Digital Twins of Common Ultrasonic NDT Inspections Verified by Photoelastic Visualizations*, Paul Holloway, Lars Gebraad, Chris Udell, Christian Boehm

ID899, *Near- and Far-Field Delamination Monitoring in Metal–Composites using Acoustic–Active Fiber-Optic Sensing: A Numerical Framework*, Saurabh Gupta, Lalita Udpa, Mahmood Haq, Yiming Deng

SS16
Machine Learning for Thermographic Process Monitoring in NDT

Tuesday, June 16th, 2026 – Room 11.C2 (all day)

ID173, *Ways to Reduce Scan Time for Highest Resolution Computed Tomography Applications*, Andreas Fischer, Tobias Neubrand, Alexander Suppes, Eberhard Neuser

ID251, *Combination of 3D FEM Model and Neural Network for Analysis of Conductive and Ferromagnetic Spots via Non Linear NDT Method*, Yasmine Gabi, Kevin Jacob, David Böttger, Bernd Wolter, Bernd Valeske

ID344, *Internal Temperature Field Prediction Using Helmholtz-Informed Neural Networks*, Pengfei Zhu, Hai Zhang, Xavier Maldague

ID353, *Detection and Staging of Hydrogen Induced Damage in Heat Exchanger Shells using Machine Learning Techniques*, Vykintas Samaitis, Renaldas Raišutis, Aadhik Asokkumar

ID455, *Non-Destructive Characterization and Evaluation of Adhesive Joints using Artificial Intelligence Tools*, Justina Šeštokė, Eglė Butkevičiūtė, Damira Smagulova, Elena Jasiūnienė

ID516, *Connecting AAS and LLMs for Controlling NDT Devices*, Frank Leinenbach, Cemil Emre Ardic, Dharma Panchal, Florian Römer

ID584, *Pioneering Turbine Blade Inspection: Inductive Thermography as a Game-Changing Alternative to Dye Penetrant Testing*, Matilde Labourdette, Rémy Drosson, Thomas Goursolle

ID621, *Leveraging Physics-Constraint Encoder-Decoder Models and Masked Autoencoders for Infrared Temperature Prediction in Tokamaks*, Cheikh. M. B. Cisse, Roberto Miorelli, Marie-Hélène Aumeunier, Alexis Juven

ID648, *Modelling Heat Diffusion in Voronoi-Based Polycrystalline Materials using AI*, Nishi Bhemani, Thulsiram Gantala, Krishnan Balasubramanian

ID670, *Segmentation-Model–Based Detection of Hairline Cracks in Forged Steel Components*, Steve Simmert, Dominik Braun, Ingmar Jakobi, Feli Schanz, Mathias Hauptvogel

ID726, *Periodical Checks for Industrial Applications of Active Thermography*, Samuel Maillard, Jean Nicolas Frouart, Benoit Lasjaunias, André Baillard, Florent Decultot

ID727, *First Approach of IR Camera Calibration Dedicated to NDT Application*, Jean Nicolas Frouart, Samuel Maillard

ID743, *Multi- and Hyperspectral Thermography for Inline Quality Assurance in Metal Additive Manufacturing*, Simon J. Altenburg, Alec Hilberg, Tina Walter, Philipp Peter Breese

ID749, *EPH-iFNO: Self-Evolving Physics-Attention Heads with Fourier Neural Operators for Virtual-Wave Inversion*, Qiuji Yi, Dong Wang, GuiYun Tian, Rocco Zito, Stefano Laureti, Peter Burgholzer, Marco Ricci

ID807, *Non-Invasive Characterization of Petrochemical Tanks via IR Thermography, Digital Twins and AI*, Eneko Aranguren, Raquel Fuente

ID812, *Prediction of Grain Orientation from Thermal Maps Using a Data-Driven and AI Approach*, Nishi Bhemani, Krishnan Balasubramanian

ID871, *Optimizing Thermographic Fatigue-Limit Estimation: GPR, SVR, and Stacking Ensembles within the Two Curves Method for C45 Steel*, Raffaella Sesana, Luca Corsaro, Francesca Cura, Mohsen Dehghanpour Abyaneh, Mohammad Sadegh Javadi

SS22
Characterization & Monitoring of Material Degradation in Historical/Architectural Artefacts

Tuesday, June 16th, 2026 – Room 11.D1 (all day)

ID216, *Examination of Inlaid Alabaster Craftwork by Using Electromagnetic Waves*, Keisuke Kato, Kaori Fukunaga

ID415, *Analysis and Monitoring of the Covering of Loggia Palace at Brescia - Italy*, Dario Foppoli, Guido Giuliani, Patrizia Scamoni

ID454, *NDT in Art: how NDT Techniques Reveal Hidden Features in Vermeer's Paintings*, David Gilbert

ID461, *Revealing Hidden Structures in the Eastern Wall of Menkaure Pyramid using NDT Techniques*, Mohamed Elkarmoty, Khalid Helal, Polina Pugacheva, Thomas Schumacher, Mehdi Tayoubi, Christian U. Grosse, Hany Helal

ID485, *Preservation of Medieval Churches Damaged by L'Aquila 2009 and Amatrice 2016 Earthquakes: Non-Destructive Techniques in Integrated Approach*, Danilo Ranalli, Claudia Durante, Gianfranco Totani

ID552, *Use GPR Analysis for Diagnostic of Mural Paintings*, Alessia Francesca Napoli, Emanuele Marchetti

ID574, *Methodology for Monitoring Cracking in Historical Wattle-and-daub Ceiling Slabs Using Infrared Thermography*, Gianluca Cadelano, Alessandro Bortolin, Giovanni Ferrarini, Monica Volinia, Mario Girotto

ID607, *Wooden Academic Heritage Preservation by Low-cost Digital Survey and Thermographic Analysis*, Martino Pavignano, Monica Volinia, Gianluca Cadelano, Mario Girotto, Maurizio Marco Bocconcino, Mariapaola Vozzola, Ursula Zich

ID675, *A Multi-scalar NDT Workflow for the Diagnostic Knowledge Project of Stratified Architectural Heritage*, Samuele Troja, Monica Volinia, Mario Girotto

ID714, *Non-Destructive Assessment of Historic Concrete Elements Using GPR and Ultrasonic Tomography: NUK Case Study (Slovenia)*, Zala Žarkovič, Rok Bregar, Petra Šajna, Sabina Dolenec

ID728, *Integration of Non-destructive Methods for Investigating the Conservation State of Fort Monte Antenne in Rome*, Paola Calicchia, Antonio Camassa, Giovanna Spadafora, Giulia Mazzoletti, Dario Foppoli

ID833, *Spreading Non-Destructive Techniques Applied to Cultural Heritage: Initiatives for Schools*, Daniela Di Martino, Giulia Marcucci, Luisa Vigorelli

ID910, *Hierarchical Infrared Thermography Framework for Ancient Timber Structures: from Solar-Induced Screening to Active Tomography*, YInuo Ding, Hai Zhang

ID911, *High-Fidelity 3D Point Cloud Reconstruction of Weathered Stone Inscriptions via Modulated Lock-in Thermography*, YInuo Ding, Hai Zhang

ID912, *A Pseudo-Line-Scanning Reconstruction Framework for Dynamic Infrared Inspection of Large-Scale Timber Structures*, YInuo Ding, Hai Zhang

ID913, *Waveform-Optimized Active Infrared Thermography on a Yuan-Dynasty Stele in Ningbo*, Zhiyang Zhang, Hai Zhang

ID914, *Automatic Defect Detection in Canvas Painting Using Active Infrared Thermography and an Improved YOLOX Network*, Zhiyang Zhang, Hai Zhang

ID952, *Non-destructive Testing to Reveal the History of a 17th-century Building*, Giuliana Cardani, Michele Cerri, Claudia Tiraboschi, Marco Cucchi

AM.7
Structural Health Monitoring

Tuesday, June 16th, 2026 – Room 11.D2 (all day)

ID125, *New Method for Steel Coupon Development May Lead to a Standard for Residual Stress Monitoring*, Evangelos Hristoforou

ID152, *Early Corrosion Detection in Jetty Pipelines using Automated Guided Wave Area Monitoring*, Keith Vine, Brian Pavlakovic, Thomas Vogt

ID169, *Rapid Defect Detection in Composite Laminates using One-Dimensional Guided Waves and Unsupervised Convolutional Autoencoders*, Shain Azadi, Yoji Okabe, Valter Carvelli

ID199, *Advancing External EMAT-Based Tank-Floor Inspection through SH Waves and Machine Learning Analytics*, Kaleeswaran Balasubramaniam, Conrad Kummeler, Álvaro Pallarés Bejarano

ID308, *Real-Time Subsea Cable Motion Monitoring via SSTDR*, Andrew Di Battista, Nathan Cartlidge, Tim Whitmore

ID392, *Distributed Acoustic Sensing (DAS) for the Monitoring of Infrastructure – Challenges and Limitations*, Bianca Weihnacht, Mario Kuehmstedt, Jörn Augustin, Mareike Stephan, Tobias Gaul, Lili Tautz, Robert Neubeck

ID425, *Dynamic Monitoring of Bridges and Viaducts*, Giorgio Sforza

ID479, *Damage Localization in a Rod by Utilization of Guided Wave Mode Separation*, Anjaly Jayakumar Pillai, Pawel Kudela, Maciej Radzienski, Rohan Soman, Tomasz Wandowski

ID528, *Integration of a Guided Wave-Based SHM System in a Full-Scale Structural Test*, Maria Moix-Bonet, Tim Behrens, Benjamin Eckstein, Daniel Schmidt, Peter Wierach

ID531, *Development of a MEMS Energy-Harvesting Sensor for Corrosion Monitoring in RC Infrastructure*, Nicharin Nithimethaporn, Katsufumi Hashimoto, Makoto Iwasaki, Riko IInuma, Hiroyuki Mitsuya

ID596, *Acoustic Emission Monitoring of Corrosion under Thermal Fluctuations*, Camilla Bahia Larocca, Denis Bogomolov, Mikhail Prokofyev, Armin Proyer, Alessandro Marzani, Luca De Marchi

ID678, *Crack Luminescence Process - Early Fatigue Crack Detection by Riluminati*, Roman Dörn

ID691, *Non-Destructive Determination of Crack Size and Crack Growth in Butt Welds of Wind Turbines: AE, PAUT and ET in Vibration Fatigue Tests*, Sebastian Barton, René Gansel, Lea Feld, Mareike Collmann, Hans Jürgen Maier

ID921, *Beyond Sensor Calibration: An Evolutionary Approach to Dynamic Structural Monitoring*, Giuseppe Mugnos, Elio Lo Giudice

ID924, *An Integrated Approach to the Structural Assessment of Steel Guyed Towers: The Case of the RAI Tower in Caltanissetta*, Elio Lo Giudice, Giuseppe Navarra, Giuseppe Mugnos, Giuseppe Catanzaro

M.1
Eddy Currents

Tuesday, June 16th, 2026 – Room 12.A (all day)

ID190, *Subsurface Multi-frequency Eddy Current Inspection of Multilayered Riveted Aluminum Plates*, Nikolaos Poulakis, Apostolos Kotouzas, Vyron Drosos, Maria Poulaki

ID193, *New High Sensitivity Eddy Current Solution for Detection and Sizing Small Flaws*, Ghislain Morais, Angélique Raude

ID284, *Advanced Eddy Current Evaluation for Thermal Damage Beneath Functional Coatings*, Irati Sanchez, Jose Luis Lanzagorta, Iratxe Aizpurua, Julen Mendikute, Julen Larrañaga

ID325, *Eddy Current-Based NDT of Braided Multistrand Carbon Fiber Rigging*, Francisco Bolinhas, Juanjo de la Cuesta, Seth Cooley, Telmo G. Santos, Miguel A. Machado

ID355, *From PT to ECA: A Simulation-driven Study on Key Parameters in Eddy Current Array Inspection Method Development*, Raju Yalagada, Silvère Barut, Denis Premel

ID381, *Adapting Conventional Dual-Channel Eddy Current Instruments for Flexible Array Operation in Harsh Environments*, Alexis Hernandez, Gordon Dobie, Charles MacLeod, Iang Gough, John Hansen, Ehsan Mohseni

ID396, *NV-NDE: a Novel Technique Using Quantum Diamond Sensors for Non-destructive Evaluation of Metals*, Baptiste Vindolet, Guillaume Bourcin, Hoai Nam Nguyen, Thomas Hingant

ID408, *Assessment of Through-Transmission Eddy Currents for Subsurface Crack Detection*, Catalin Mandache, Leo Dionne, Antal Prigli

ID413, *Quantitative Evaluation of Crack Depth in Ceramic Matrix Composites Using Eddy Current Testing*, Kohei Minoura, Tetsuya Uchimoto, Hiroyuki Kosukegawa, Shuhei Hashimoto, Kohei Kudo, Mitsuo Hashimoto, Toshiyuki Takagi

ID433, *Local Resistance Evaluation of Printed Electronics During Jet-Dispensing and IR-Sintering Using Eddy Current and Laser Profilometry with Temperature and Lift-Off Compensation*, Nataliia Gromberg, Lukas Boxberger, Till Schulze, Henning Heuer, Welf-Guntram Drossel

ID478, *Analysis of Transmit-Receive Coil Spacing for Phase-Based Depth Characterization in Eddy Current Array*, Ana Carolina P. S. Brandão, Iane de A. Soares, Caio Henrique A. de Souza, Laudemiro Nogueira Jr., Carlos B. Eckstein, Gabriela R. Pereira

ID481, *NDE of Mechanical Properties of Fatigue Damaged Austenitic Stainless Steel with ECT Signals*, Yinqiang Qu, Ke Deng, Hong-En Chen, Shejuan Xie, Zhenmao Chen

ID522, *Innovative Eddy Current Method and Probe for Detecting Defects in Any Orientation*, Federico Carere, Alessandro Sardellitti, Silvia Sangiovanni, Marco Laracca

ID525, *An Innovative ECT Method for Advanced Corrosion Detection and Characterization*, Alessandro Sardellitti, Marco Laracca, Angelo D'Aguanno, Vincenzo Mottola, Filippo Milano, Luigi Ferrigno, Antonello Tamburrino

ID716, *Principle and Instrument of Corrosion Detection by Electromagnetic Imaging under the Concrete Overlayer*, XinJun Wu, JiaWei Gong, FangHao Zhai, WenLong Zhang

ID776, *EddyGlove: A Wearable Eddy Current Testing Device for Defect Detection in Confined Environments*, Erhui Sun, Abdelkhalick Mohammad, Andres Gameros Madrigal, Dragos Axinte, Andy Norton

ID806, *Eddy Current Testing of a Carbon Fiber Blade Edge*, Marie Rudolfova

ID825, *A General Methodology for the Identification of Invariant Features in Eddy Current Testing*, Vincenzo Mottola, Alessandro Sardellitti, Filippo Milano, Luigi Ferrigno, Marco Laracca, Antonello Tamburrino

ID834, *Impedance Level-Set Curves in Eddy Current Testing of Conductive Plates under Unknown Coil Tilt*, Leonardo Max Golušin, Darko Vasić

SS3
From Limited Data to Reliable Diagnostics

Tuesday, June 16th, 2026 – Room 12.B (all day)

ID119, *Prediction of Structural Integrity Assessment Parameters from Ultrasound Images via Machine Learning*, Junlei An, Qiang Liu, Nicolas Larrosa, Jie Zhang

ID135, *Physics-Driven Neural Network Solver for Electromagnetic Non-Destructive Evaluation*, Yutong Du, Zicheng Liu

ID151, *Simulation-Based Neural Networks for Ultrasonic Testing*, Channa Nageswaran

ID179, *Manipulating Ultrasonic Data from Test Pieces to Create Blind Datasets*, Christopher Curtis

ID229, *Quantifying Corrosion Progression Through Text–Image Embeddings with CLIP*, Ramon Helwing, Frank Walther

ID235, *Probabilistic Deep Learning for Reliable Diagnostics using Guided Wave*, Jaebeom Lee, Clément Fisher, Seungjun Lee, Choon-Su Park, Pierre Calmon

ID266, *Defect Detection AI for Casting in Radiographic Testing based on Image Simulation*, Haruka Ikeda, Seiya Inagi, Kazuchika Iwami, Sadato Hiratsuka

ID416, *Correlation-Based Memory Updating for Continual Learning under Limited Data Conditions*, Chanwon Park, Jaebeom Lee, Young-Joo Lee

ID452, *Crack Characterization Using Multi-Scale Scattering Matrix Denoising Extrapolation and Optimal Scale Selection*, Yiliang Hu, Long Bai

ID580, *Defect Classification in Wire Arc Additive Manufacturing via a Semi Supervised Teacher–Student Model*, Maedeh Gourakani, Carmelo Mineo, Donatella Cerniglia, Andrea Bertazzo, Federica Tiso, Giovanni Avallone

ID615, *Embedded Deep Learning System for Reliable Operator Support in TFM-based Weld Inspection*, Robin Guyon, Matthew Newson, David Roué, Auguste Gervais, Roberto Miorelli, Clément Fisher

ID642, *Generating Synthetic Ultrasonic Testing Data with Deep Learning: Comparing Simulated and Deep Learning-Based Flaw Responses*, Caleb Watson

ID725, *Training 3D AI models for PAUT: Performance, Data Needs, and Deployment Considerations*, Richard Rhéaume

ID731, *Efficient Transformers for X-Ray NDT in Limited Data Scenarios*, Ihssane Ghalas, Jennifer Vandoni

ID736, *Physics Based Synthetic Data Generation for Non-Destructive Testing Applications*, Christophe Reboud, Roberto Miorelli, Anthony Touron, Nicolas Leymarie

ID803, *Physics-Informed Filters for Reconstructing Missing Data in Ultrasonic Guided Wavefields*, Michael MacIssac, Amanda Beck, Woohyun Eum, Charlie Tran, Joel Harley, Ghatu Subhash

ID815, *The Applicability of Virtual Flaw Data Augmentation across NDE Modalities*, Topias Tyystjärvi, Oskar Siljama, Tuomas Koskinen, Oskari Jessen-Juhler, Iikka Virkkunen

ID894, *1D-CNN for Automated Characterisation of Thermal Fatigue Cracks*, Thomas Beckingham, Jason F. Ralph, Stewart G. Haslinger, James Gaffney, Daniel Colquitt, Peter Huthwaite, Mike Lowe

M.5
Ultrasonics

Tuesday, June 16th, 2026 – Room 12.C (all day)
Wednesday, June 17th, 2026 – Room 12.C (all day)
Thursday, June 18th, 2026 – Room 12.C (morning)

ID147, *Ultrasonic Inspection on Metal and Composite Material – Application and Differences*, Valter Capitani, Nicola Centra, Giacomo Maione

ID156, *Imaging and Sizing of Real SCC Using FMC/TFM and PCI*, So Kitazawa, Hirofumi Ouchi, Isao Yoshida

ID159, *Matrix Technology Applications for Advanced Ultrasonic Testing*, Stephan Falter, Thomas Würschig

ID175, *A Circumferential Radially Magnetized EMAT for High-Temperature Equipment*, Siyu Wang, Fangji Gan, Bo Zhao, Jiubin Tan

ID207, *New Method and Mobile Testing System for Inspecting Light Poles and Corrosion Under Pipe Supports using Guided Ultrasonic Waves*, Roman Pinchuk, Andrey Bulavinov, Ralf Birringer

ID212, *Advanced Ultrasonic Imaging for Hardening Depth Measurement*, Héctor Calás, Nans Laroche, Cyril Thibault, Gavin Dao, Bjørn Meerwald, Søren Elmose

ID237, *Advanced Ultrasound Methods for HTHA Inspection*, Stéphan Couture

ID246, *High-resolution 3D Ultrasonic Imaging by 1024-element 2D Matrix Array Transducers*, Yoshikazu Ohara, Ryuya Kawaguchi, Koki Shimizu, Yudai Yashiro, Yuto Fujikawa, Akira Nagakubo

ID271, *Inspection for SCC in Uncoated Austenitic Stainless Steel*, Mark Jones

ID283, *Case Study - Inspection of Weld Backing Plate*, Stéphan Couture

ID309, *CIVA Scan Plan: a Generic Framework for Ultrasonic Coverage Evaluation and Inspection Plan Optimization*, Stéphane Le Berre, Karim Jezzine, Julien Banchet, Patrice Pinto, William Mathieu

ID317, *Simulations and Experiments to Optimize Laser Ultrasonic Testing*, Benjamin van Elburg, Patrick H. Jansen, Arno Volker

ID349, *Ultrasonic Evaluation of Equivalent Stress in Bolts Using Acoustic Birefringence*, Tianxiang Ge, Jiaxin Li, Bo Zhao

ID350, *Refractories under Observation: Comparison of Air-coupled Ultrasound Testing and Computed Tomography*, Yury Golitsyn, Ralf Steinhausen

ID375, *Ultrasonic NDT of a Multipass Austenitic TIG Weld: Challenges Related to Welding Position*, Simon Delmotte, Cécile Gueudré, Marie-Aude Ploix, Jean-Christophe Vallée, Gilles Corneloup

ID391, *Probability of Detection of an Automated Ultrasonic Testing Inspection System in the Seamless Pipe Industry*, Fabien Lefevre, Bada Ndao, Olivier Lazzari, Daryl Ouedraogo, Bastien Clausse, Fabrice Foucher

ID393, *Sparse 3D imaging*, Pierre Kauffmann, Khuram Faraz, Jean-Baptiste Jacquet, Jean-Luc Guey, Mohamed Tamraoui, Barbara Nicolas, Hervé Liebgott, Etienne Coffy

ID401, *Distinguishing Defects from Corrosion in Ultrasound Images*, Yongxing Cai, Anthony Mulholland, Jie Zhang

ID428, *Ultrasonic Assessment of Damage Evolution and Self-healing in High-performance PVA Fiber-reinforced Concrete*, Yasmin W. Tamimi, Vanessa G. Cappellesso, Gerlinde Lefever, Nele De Belie, Dimitrios G. Aggelis

ID435, *A Novel Method to Measure Wall Thickness Under an Obstruction by Conventional Ultrasonic Thickness and Flaw Gauges*, Matthew Davison

ID465, *Feasibility Study of Applying an Advanced Phased-Array Ultrasonic Technique to Weld Inspection in Thin Stainless-Steel Sheets*, Tarik Iazourene, Etienne Laroche, Jimmy Ponton

ID526, *Factors Influencing Corrosion Rate Estimations focusing on Image Stitching on Ultrasound Data*, Alexandru Nichita, Frederic Cegla

ID534, *Comparison of TFM Inspection Techniques with FMC and PWI Firing for Stainless Steel and Dissimilar Metal Welds*, Paul Hillman, Jérôme Poirier, Guy Maes

ID539, *Development of an Ultrasonic Inspection Tool for the Evaluation and Monitoring Offshore Pipelines with Internal HDPE Coating*, Marcella Grosso Lima, Thiago T. M. Neves, Heloisa Althoff, Daniel Braga, João Pedro M. Casacão, Cesar G. Camerini, Gabriela R. Pereira

ID551, *Hybrid Multiscale Attention-Based Super-Resolution for Real-Time Transcranial Ultrasound*, Aryaz Baradarani, Kiyanoosh Shapoori, Saghar Farhangfar, Eugene Malyarenko, Juri G. Gelovani, Roman Maev

ID558, *Characterisation of Critical Microstructures in Metals Using Shear Ultrasound*, André Lello de Almeida, Michael J. S. Lowe, Bo Lan

ID559, *Robot-based Immersion Ultrasonic Testing using adapted TFM/FMC*, Thomas Heckel, Tobias Homann, Christian Hassenstein, Friedrich Bake

ID568, *Deployment of AI-Assisted Ultrasonic Inspections in the Nuclear Power Industry*, Thiago Osorio

ID572, *Fully Non-Contact ACUT-Based Crack Depth Evaluation Using Crack-Guided Leaky Rayleigh Modes*, Hyeonwoo Nam, Chan Wook Park, Wonjae Choi

ID597, *Austenitic Welds Phased Array Ultrasonic Inspection Modeling and MAPoD Study*, Bastien Clausse, Adam Pacalis, Fabrice Foucher, Adam Wick, Paul Boulware, Eric Dittman, Mark Lozev

ID612, *Advanced Methodology of Ultrasonic Testing (UT/PA) of Thin-Walled Tubes: Replacement of Radiographic Inspection and Efficiency Improvement of NDT Processes*, Petr Žbánek, Jan Andrlík

ID669, *From Data Acquisition to Reliable Defect Characterization: Industrial Applications of FMC, TFM and PCI*, Alessandro Magni, Marco Casaril, Luigi Corsi

ID703, *Non-Destructive Characterization of the Curing Process of Thick-Film Adhesive Bonds using Transverse Ultrasonic Waves*, Greta Scholle, Christian Mathiszik, Franz Hielscher, Johannes Koal, Hans Christian Schmale

ID748, *Reducing Inspection Ambiguity from Degraded A-Scans in Ultrasonic Spot Weld Analysis*, Aryaz Baradarani, Roman Maev

ID752, *Embedded Super-Resolution Framework for Ultrasonic Spot Weld Inspection*, Aryaz Baradarani, Roman Maev

ID800, *Multi-frequency Time Reversal Based Super Resolution Imaging Performance Studies for Ultrasonic Nondestructive Testing*, Chengguang Fan, Xiaozhen Zhang, Kunyou Jiang, Zongyu Wu, Quan Chen, Wenlong Zhang

ID839, *Advances in Ultrasonic Testing for Clad and Lined Pipeline Girth Welds Using Virtual Source-TFM*, Burak Bölükbaşı, Petr Kulikov, Özgür Özünlü

ID869, *Ultrasonic Scattering utilizing Distributed Synthetic Microstructures*, Showmic Islam, Joseph A. Turner

ID887, *Comparison of Analytical and Numerical Methods for the Diffraction of Ultrasound from Surface-breaking Cracks*, Christopher M. Ashworth, James Gaffney, Jason F. Ralph, Ian Thompson, Stewart G. Haslinger

ID923, *SITAU-II: A High-Performance Ultrasound Phased Array Research Platform*, Roberto Giacchetta, Ricardo González Bueno, Jorge Ferandez Cruza, Edurado Moreno Hernandez

ID927, *AirScope: 20 Years Innovating in Non-Contact Ultrasound Aeronautical Inspection*, Roberto Giacchetta, Ricardo González Bueno, Jorge F. Cruza, Eduardo Moreno Hernández

ID936, *Parallel Acquisition of PCI and TFM Images for Enhanced Assessment Accuracy*, Kevin Westra, Adri van den Biggelaar, Niels Pörtzgen

ID948, *Ultrasonic Characterisation of Grain Orientations, Elastic Tensor and Geometry of Thick-section Welds using Deep Learning*, Lucas Queiroz Machado, Thomas Blumensath, Vykintas Samaitis, Michael Lowe, Michal Kalkowski

SS4
Applications of AI for Image Evaluation in Radiographic Testing

Tuesday, June 16th, 2026 – Room GS.A (morning)

ID197, *Vision–Language Model Assisted Interpretation in Radiographic Welding Defect Evaluation*, Haoyu Wen, Baoxin Zhang, Xuefeng Zhao, Juntao Wu, Jiajia Liu, Wangwang Liu, Ruotong Zhang, Hao Qiu, Xinghua Yu

ID342, *X-Ray Defect Recognition – Reliable and Efficient with AI Support*, Christopher Zepp

ID489, *Applications of AI in Non-Destructive Examinations*, Teodor Tranca, Mircea Tranca, Raimund Zeman, Cezar Petru Ardeleanu Blaga

ID553, *Lightweight Super-Resolution Enhanced YOLOv8 for Improving Consistency in Radiographic Defect Detection of Titanium Alloy Weld Seams*, Zhiwei Zhang, Jingzhao Wang, Chao Zhang, Xinyan Wang, Xuwu Chai, Jingyuan Gao, Xiaotong Liu, Bingyang Wang

ID585, *Fully Autonomous Defect Detection in 3D-CT Data using the Example of 3D Metal Printing*, Sven Gondrom-Linke, Tiago Ramos

ID689, *Projection-Domain Defect Segmentation for Accelerated Quality Assessment in Industrial Computed Tomography*, Tim Schanz, Robin Tenscher-Philipp, Martin Simon

ID721, *X-Ray Digital Radiography and Computed Tomography: Investigation of Defect Detection Capabilities with Conventional and Artificial Intelligence Solutions - A Case Study in the Aerospace Industry*, Valentina Aloisi, Stephan Tschechne, Edson Costa-Santos, Christian Wojek

ID859, *CT Based Deep Learning and Physics-Informed Surrogate Models for Structural Integrity Evaluation*, Martin Simon, Tim Schanz, Robin Tenscher-Philipp

ID915, *Automated Defect Recognition in Solid Rocket Motor Manufacturing: Reconciling AI Performance Metrics with ECSS POD Requirements for Digital Radiographic Inspection of Solid Rocket Motors*, Domenico Telesca, Liberata Furente, Alessio Franchina

SS11
Neutron and other ND nuclear techniques for A2 15:40–17:00 heritage science

Tuesday, June 16th, 2026 – Room GS.A (afternoon)

ID331, *Production of ^{26}Al and ^{10}Be via Neutron Reactions in SiO_2 Rocks: Implications for Burial Dating Related to the Cradle of Humankind-UNESCO World Heritage Sites*, Sara Rabaglia, Nicholas Pieretti, Cristian Massimi

ID593, *Neutron and X-Ray Tomography for Non-Destructive Characterisation of Archaeological Iron Artefacts and Assessment of Conservation Treatment*, Laura Cristina, Ocson Cocen, Seren Azad, David Mannes, Anders Kaestner, Laura Brambilla

ID673, *Neutron-Based Methods for Heritage Science: a Case Study on a Nuragic Figurine*, Matteo Cataldo, Massimiliano Clemenza, Sylvia Britto, Antonella Scherillo, Nadia Canu, Giulia Marcucci, Valeria Sipala, Bruno Billeci, Piernicola Oliva

ID700, *Muonic Atom X-Ray Emission Spectroscopy (μXES) for Cultural Heritage: the INFN-CHNet Experience*, Paola Monza

ID755, *Provenance Investigation of Cultural Heritage Materials with Ion Beam Analysis*, Marta Magalini, Laura Guidorzi, Alessandro Re, Alessandro Lo Giudice

ID772, *Calibration of Bragg Edge Neutron Transmission Analysis and Characterization of Ancient Bronze Mirrors from Magna Graecia*, Matilde Dematteis, Miriana Marabotto, Alessandro Re, Alessandro Lo Giudice, Laura Guidorzi, Marta Magalini, Francesca Tansella, Chiara Garagiola, Sylvia Britto, Ranggi Ramadhan, Francesco Grazzi, Diego Elia, Valeria Meirano, Fabrizio Sudano, Elena Rita Trunfio, Daniela Di Martino

ID792, *Unlocking Hidden Material Signatures through Neutron Resonance Transmission Imaging*, Giulia Marcucci, Daniela Di Martino, Costanza Cucini, Maya Musa, Maria Pia Riccardi, Antonella Scherillo

ID843, *Non-Invasive High-Resolution Neutron Tomography for the Study of Filigree Decoration of the Chiaravalle Cross*, Luisa Vigorelli, Floriana Salvemini, Klaud Jakubowski, Mitra Safavi-Naeini, Giulia Marcucci, Costanza Cucini, Maria Pia Riccardi, Daniela Di Martino

WS
ICNDT, NDT Frontiers

Tuesday, June 16th, 2026 – Room GS.C (morning)

ID149, *Breaking Barriers in NDE: AI-Enhanced Solutions for Future Smart NDE*, Roman Maev

ID172, *Laser Ultrasound for Dynamic Rail Base Inspections*, Shant Kenderian, Anish Poudel

ID273, *Supporting Sustainable Manufacture and Through-Life Maintenance of Structures Through NDT Value Considerations*, Gareth Pierce

ID477, *Toward NDT Digitalization: Challenge to Correlating Inspection Locations with NDT Data*, Makoto Ochiai, Setsu Yamamoto

ID504, *AI in NDT: Hype, History, and the Case for Reluctant Adoption*, Glenn Tubrett

ID751, *Advancing NDE Qualification Requirements in the Era of Intelligent Inspection*, David Gilbert

ID872, *Defect Initiation and Propagation in GFRP Ring through Multi-Physics Simulation and Acoustic Emission Monitoring*, Oludare Amos Solademi, Judith Abolle-Okoyeagu, James Njuguna

ID900, *CWT-Informed Deep Learning Framework for Intelligent Interpretation of Guided Wave Scattering in Hybrid Laminated Structures toward NDE 5.0*, Saurabh Gupta, Sujoy Mondol, Lalita Udpa, Mahmood Haq

M.7
Tomography

Wednesday, June 17th, 2026 – Room 11.A2 (all day)

ID132, *Aircraft High-pressure Blade Dimensional Tomography: Application Case for an Advanced Deep Segmentation Method*, Phileas Guégan, Patrick Fuchs, Nicolas Coutant, Clément Remacha

ID150, *Determination of Measurement Uncertainty in X-ray Computed Tomography through Simulation - the CTSimU3 Project*, Stefan Kasperl, Frederic Ballach, Markus Bartscher, Carsten Bellon, Fabrício Borges de Oliveira, Matthias Braun, Burhan Dogan, Matthias Fleßner, Patrick Fuchs, Olaf Günnewig, Tino Hausotte, Gerd-Rüdiger Jaenisch, Thomas Kleinteich, René Laquai, Nicole Maass, Thomas Mayer, Tamara Reuter, Mirko von Schmid, Alexander Suppes, Daniel Weiß

ID160, *Ultrasonic Velocity and Strength Mapping of Concrete Structures using Elop Insight Scanner*, Kamal Raj Chapagain, Werner Bjerke, Taras Tyrsa, Emir Evlic

ID180, *Procedural Design of an Industrial X-ray Computed Tomography Machine for Educational Purposes*, Eleonora Fontò, Egidio Angelo Gallicchio, Filippo Maria Bagnasco, Chiara Terrone, Alex Aiello, Aldo Canova

ID209, *Quantum Computing as a Future Tool for three-dimensional X-ray Imaging and Image Processing: Latest Progress and Perspectives*, Theobald Fuchs, Anastasia Papadaki, Thomas Lang, Martin Blaimer, Anja Heim, Kilian Dremel, Dimitri Prjamkov, Markus Firsching, Stefan Kasperl

ID372, *Integration of Simulated and Experimental CT Data for Automated Defect Detection in Additive Manufactured Components*, Celia Vilches, Amalia Salinas, Miroslav Yosifov, Sascha Senck, Carlos Galleguillos

ID421, *From Conventional Tomography to Laminography: Geometry-Specific Trajectory Optimization and Reconstruction Strategies*, Jitendra Singh Rathore, Victor Bussy, Marius Costin, Marie-Bénédicte Jacques

ID668, *The Strategic Role of Computed Tomography in the Conduction of Failure Analysis*, Benedetta Oneda, Igor Giroletti, Stefano Rossi

ID707, *Super-Resolution Microcomputed Tomography for Porous Aluminium Foams*, Sascha Senck, Lukas Nepelius, Patrick Weinberger, Markus Höglinger-Rauscher, Jonathan Glinz

ID750, *Logitom-casting: AI Powered Automated X-ray Tomography Processing Software for Quality Control*, Awen Autret, Limamou Gueye, Duy Nguyen, Sofiane Terzi, Valérie Kaftandjian, Sébastien Brzuchacz, Patrick Bouvet, Caroline Boudou, Barbara Fayard

ID796, *Projection-Volume Hybrid Stitching for Large-Scale Synchrotron CT using a Vertical Fan-Beam Geometry*, Wataru Yamamoto, Yutaka Ohtake, Takumi Kimura, Hiroto Motoyama, Satoru Egawa, Gota Yamaguchi, Hidekazu Mimura, Yukie Nagai

ID817, *A Micro EIT Sensor for Process Tomography*, Antonio Affanni, Ruben Specogna, Francesco Trevisan, Antonello Tamburrino

ID821, *Application of NDT Technologies for Designing Food Textures*, Yukie Nagai, Kento Imani, Wataru Yamamoto, Yutaka Ohtake, Hiroto Motoyama, Satoru Egawa, Gota Yamaguchi, Hidekazu Mimura

ID851, *Unveiling CO_2 Uptake in a Metal-organic Frameworks (MOFs) Based Packed Bed by X-ray Computed Tomography*, Jorge Martinez-Garcia, Cedric Reichmuth, Damian Gwerder, Diponker Karmoker, Benjamin Fumey, Philipp Schuetz

ID856, *The Limitations of Applying Radiographic Criteria to CT Images in Non-destructive Testing*, Sebastien Brzuchacz

SS10
Nonlinear Ultrasonics

Wednesday, June 17th, 2026 – Room 11.B2 (all day)

ID139, *Nonlinear Wave Mixing Techniques to Characterize Materials*, Laurence J. Jacobs

ID163, *Assessment of the Industrial Applicability of the Fundamental Wave Amplitude Difference Method for the Inspection of Welds*, Arthur Perrin, Ewen Carcreff, Sylvain Deutsch, Jonathan Peixoto

ID228, *Theoretical Basis of the Non-Destructive Testing using Quaternion Algebra*, Sadataka Furui

ID238, *Vibro-Ultrasonic Phased Array utilizing Local Defect Heating due to Nonlinear Phenomena for Crack Imaging*, Yoshikazu Ohara, Taketo Iijima, Toshiki Yoshikawa, Ryo Taniuchi, Akira Nagakubo, Łukasz Pieczonka, Koen Van Den Abeele

ID248, *Monitoring Corrosion-Induced Damage in Concrete using Nonlinear Cross-Modulation and Acoustic Emission*, Markus Nilsson

ID453, *Multi-Mode Nonlinear Resonant Ultrasound Spectroscopy (MM-NRUS) for Quality Control of Additively Manufactured Metals*, Rui Zhang, Adil Han Orta, Mathias Kersemans

ID484, *Acousto-Optic Tomography-Holography: a Novel, Sensitive and Quantitative NDT Method*, Yusheng Ma, Cedric Debusschere, Koen Van Den Abeele, Mathias Kersemans

ID509, *Applications of Micro-Hollow Cathode as a Transmitter for Air-Coupled Ultrasonic Testing*, Mate Gaal, Dmitry Solodov, Narges Nazari

ID710, *Nonlinear Coda Wave Interferometry: Preliminary Results into using Ambient Noise as Pump*, Shilan Shaabani, Pierric Mora, Parisa Shokouhi, Olivier Durand, Odile Abraham

ID835, *Quaternion Theory for Nonlinear Ultrasonics Testing*, Serge Dos Santos, Sadataka Furui

ID847, *Nonlinear Ultrasonic Characterization of Thermal-aging Effects on Contaminated Epoxy Polymers*, Do-Kyung Pyun, Jonghwan Park, Jaesun Lee

ID888, *Non-Destructive Testing in (3+1)D and Optimal Path Search using Machine Learning Techniques*, Sadataka Furui

SS5
Integration of NDT into Building Information Models for Civil Structures and Infrastructures

Wednesday, June 17th, 2026 – Room 11.C1 (morning)

ID427, *Integration of UPV Data In H-BIM Environment for Strength Estimation and Monitoring of Building Stones in Architectural Heritage*, Emilia Vasanelli, Matteo Sticchi, Gianni Blasi, Daniele Perrone

ID473, *NDT, Building Models, Numerical Simulations, Image Fusion, and Virtual Reality – Case Study Investigating an Old Cultural Heritage Structure*, Christian U. Grosse, Mohamed Elkarmoty, Thomas Schumacher, Benoit Marini, Mehdi Tayoubi, Hany Helal

ID482, *Data-Driven Integration of Non-Destructive Envelope Diagnostics into HBIM for Energy-Aware Digital Models of Historic Buildings*, Domenico Palladino, Silvia Di Turi, Nicolandrea Calabrese, Angelo Massafra, Ugo Maria Coraglia

ID643, *Assessing Cultural Heritage with NDT: Julio Escámez's 'Principio y Fin' Mural*, Rodrigo Vargas, Mario Barrera, Gonzalo Bastias, Jaime Lisboa, M. Angela Benavente, Rodrigo Reyes

ID757, *BIM Oriented Non-Destructive Testing of a Reinforced Concrete Building*, Gian Marco Revel, Rifat Seferi, Angelo Tatì, Elena Candigliota, Gloria Cosoli, Giuseppe Marghella, Anna Marzo, Saverio Mazzarelli, Concetta Tripepi, Vincenza A.M. Luprano

ID758, *Integrating NDT Results into BIM for Social Housing Renovation: The ReHouse Project methodology*, Patrizia Aversa, Monica Misceo, Antonio Di Micco, Salvatore Tamburrino, Carla Di Biccari, Mattia Mangia, Emanuela Brai, Paola M. Albanese, Valeria Cascione, Vincenza A. M. Luprano, Angelo Corallo

ID898, *Mutual Validation of UPV, Schmidt Hammer, and Windsor Probe Tests for Estimating Compressive Strength of Earthquake-Damaged Concrete*, Mehmet Esen Eren, Cenk Fenerli

ID902, *Monitoring of a Prestressed Concrete Bridge During Phases of Induced Damage through Cutting of Prestressing Cable Strands*, Luca Ranedda, Giorgia Campori, Calogero Pio Di Vita, Diego Esposito, Daniele Insana, Antonio Mucciarone

ID904, *A Model-Based Digital Twin for Structural Health Monitoring*, Soroosh Kamali, Antonio Palermo, Rosario Ceravolo, Alessandro Marzani

SS14
Custom pulsing for ultrasonic NDT

Wednesday, June 17th, 2026 – Room 11.C1 (afternoon)

ID167, *Applications of Laser Diffuse Ultrasonic Phased Arrays for Three-dimensional Imaging Volumetric Defects*, Jun Li, Paul Wilcox, Jie Zhang

ID400, *Enhanced Inspection Applications Using Modulated Ultrasonic Transmitters*, Thomas Würschig, Peter Fey, Walter deOdorico, Stephan Falter

ID582, *Smart Contactless Nonlinear Ultrasound Testing – Research with Opto-Acoustical Arbitrary Waveform Excitation*, Florian Rudinger, Martin Wallner, Bernhard Reitinger

ID664, *Improving Image Quality in Ultrasonic Inspection for Complex Material Using Custom Emission*, Ralph Abirizk, Ewen Carcreff

SS24
Diagnostic for power plants

Wednesday, June 17th, 2026 – Room 11.C2 (morning)

ID486, *Addressing Uncertainties in Material Parameters for Nuclear Weld Imaging by the Development of an Adaptive Algorithm*, Ali Boukham, Jordan Barras, Maxance Marmonier, Nicolas Leymarie

ID540, *Advanced Multivariate Anomaly Detection for Wind Turbines Using SCADA Data and Machine Learning*, Alessandro Paolo Daga, Alessandro Fasana, Luigi Garibaldi, Marco Gerbino, Luca Viale

ID550, *Guidelines for Selecting 2D Matrix PA Probe Configuration for Weld Inspection: a Parametric Study*, Florin Turcu, Benoit Cabirol, Justin Wendorf, Alan Maclean

ID562, *Criticality Criteria for Penstocks in Hydroelectric Power Plants: the Importance of Non-destructive Testing within a Component Evaluation Process*, Marco Lauro, Fabio Bettoni, Francesco Fornari

ID573, *Possibilities of Inspections of NPP Tanks and Containment Liners*, Jaroslav Brom, Roman Nebel, Zbyněk Hlaváč1

ID591, *PAUT Integrated Process for the Examination of Pipe Fitting Transition*, Kevin Xiang, Ludovic Pinier

ID608, *Hybrid Data Fusion in Guided Wave Tomography: Bridging Defect Detection and Life Assessment*, Younho Cho, Igor Sakhabiev

ID657, *Beyond Defect Detection: Integrating NDT with Fracture Mechanics for Life Extension*, Younho Cho

ID684, *Rotor-Bearing Hydrodynamic Modeling for Orbit-Based Diagnostics in Hydropower Units*, Bekhzod Abdullaev, Riccardo Barbera, Alessandro Paolo Daga, Luigi Garibaldi, Damiano Cuvato, Manuel Bonjean, Antonino Sannolo, Lorenzo Artaz

ID699, *Grey-Box Digital Twin of a Pelton Hydropower Unit: Characterisation for Diagnostic Applications*, Riccardo Barbera, Alessandro Paolo Daga, Luigi Garibaldi, Damiano Cuvato, Manuel Bonjean, Antonino Sannolo, Lorenzo Artaz

ID798, *Non-destructive Experimental Fault Diagnosis of Wind Turbine Drivetrain Components Using Tower-base Accelerometers*, Francesco Castellani, Davide Astolfi, Alessandro Canali, Alessandro Paolo Daga, Emiliano Sisinni, Alessandra Flammini

M.6
Shearography

Wednesday, June 17th, 2026 – Room 11.C2 (afternoon)

ID171, *Spatial Phase Shifting Shearography for Industrial In-Line Quality Control*, Michael Schuth, Valentin Bastgen, Jessica Plaßmann

ID646, *Acoustic Shearography for Pipeline Inspection*, Lei Zhang, Zi Wen Tham, Yi Fan Chen

ID647, *Human-Technology Synergy in Non-Destructive Testing: Enhancing Reliability in Safety-Critical Sectors*, Karan Doshi

ID933, *Shearography for Non-Destructive Inspection of Composite Repairs under Passive Fire Protection*, Mauro Eduardo Benedet, Daniel Pedro Willemann, Analucia Vieira Fantin, Armando Albertazzi Jr., Bruno Schutz, Leandro Bezerra, Marcelo Raulino

M.4
Radiographic Testing

Wednesday, June 17th, 2026 – Room 11.D1 (all day)

ID158, *A Novel Multi-Frame Acquisition Approach for Wide-Field Imaging with Noise Reduction*, Philippe Duvauchelle, Angela Peterzol

ID240, *Digital Radiography using CR and DDA for Welds*, Anmol Birring

ID298, *Integration of AI-Based Automatic Defect Recognition (ADR) in X-ray Inspection of Castings*, Thomas Stocker, Bishwajit Mohan Gosswami, Rajib Kumar Chanda, Frank Sukowski, Tobias Schön

ID326, *Eliminating Artifacts and Boosting Efficiency with Varex TrueSpectrum Imaging*, Martin Hu, Michael Stamm, Jonathan Schock

ID341, *Dual-Temperature-CT: An Experimental Method for Three-Dimensional Polymer Characterization*, Jonathan Glinz, Sarah Heupl, Julia Thalhammer, Johann Kastner, Sascha Senck

ID387, *Advances in X-ray CT of Large & Dense AM Components*, Nick Brierley, Karin Mrzljak, Mirko von Schmid, Moritz Weiß, Benjamin Zengerling, Olaf Günnewig

ID407, *European and International Standardization – a Strategic Tool for Stakeholders in NDT*, Franziska Baensch, Michael Schmitt, Daniel Müller, Uwe Zscherpel, Uwe Ewert

ID434, *Simulation of Functional Ageing towards Failure Prediction of Dental Restorations - Investigating the Crown-cement-tooth Complex using Synchrotron x-ray Refraction Radiography*, Akshar Soni, Jonas Rechlin, Tobias Horbrügger, Itziar Serrano-Munoz, Franziska Schmidt, Manja von Stein-Lausnitz, Paul Zaslansky, Florian Beuer, Claudia Fleck, Andreas Kupsch

ID617, *Numerical Modelling of Photon-Counting Detectors for Industrial Radiography Applications*, Roman Fernandez, Anthony Touron

ID632, *Non-Destructive Evaluation of Rotary Friction Welded CuCrZr–AISI 316 Joints for Fusion Applications*, Fabio Bergamini, Alessandra Fava, Francesco Cognini, Giuseppe Barbieri, Angelo Tatì, Paolo Rossi, Jeong-Ha You

ID644, *Stereo Digital Radiography Using Paired LDAs*, James Prindiville, Nguyen Luu, Randall Wilcox, Chinlee Wang

ID692, *XXL High-resolution Digital Radiography: A Solution for Large-format Industrial Parts and Artworks*, Eusebio Solorzano, Daniel Cuadra-Rodriguez, Jorge Monzon de Castro

ID740, *In-line X-ray Inspection of Medium Density Fiberboard Mattress*, Nicola Zambelli, Silvia Zanettini, Nicola Sarzi-Amadé, Paolo Ferrarini, Davide Cavaliere, Antonella Travaglia, Brando Campestrini

ID841, *Development of a Compact and Scalable LINAC for Industrial X-Ray Applications*, Roberto Bonifazi, David Alesini, Luigi Faillace

ID918, *Multi-Source Non-Destructive Evaluation of Carbon Steel Specimens Subjected to Static Tensile Loading*, Tomasz Chady, Jacek Grochowalski, Ryszard Łukaszuk

SS1
Multimodal NDE

Wednesday, June 17th, 2026 – Room 11.D2 (all day)

ID233, *Application of Ultrasonic Phased Arrays for Detecting Discrepancies in Continuous Laser Welding*, Giuseppe Citro, Eric Colace, Dario Panaccione

ID275, *Multimodal Non-Destructive Testing and Fusion: Case Study on Lightweight Aerospace Structures*, Nan Yue, Ana Menéndez Orellana, Ludovica Tromba, Raffaella Sesana, Christian U. Grosse

ID409, *Eddy Current Testing for Subsurface Defects in Dissimilar Aluminum Alloy Joints Produced by Friction Stir Welding Method*, Izabela Kalemba-Rec, Sarken Kapayeva, John Hansen, Marek Bergander

ID440, *How As-Built Surface Waviness Affects the Fatigue Performance of Steel Components Remanufactured by Wire Arc Additive Manufacturing*, Robin Motte, Matthieu Vander Linden, Dana Ghesquiere, Luka Steenssens, Anil Sudhakar, Kris Hectors, Wim De Waele

ID474, *A Multimodal Non-Destructive Method for Local and Non-Local Characterization of Residual Stresses in Rolled Steel Plates*, Alain Lhémery, Flavien Agon, Sarah Vincent, Julien Moine, Quang Anh Vu, Kerian Wegerhoff, Fan Zhang, Laurent Daniel, Abdellahi Abderahmane, Mathieu Domenjoud, David Quidort, Guillaume Cousin, Antoine Proust

ID497, *Ultrasonic Imaging of Flaws in Thick-Walled Impeller Test Block Using FMC-TFM and PWI*, Prashanth Kumar Chinta, Robert Peip, Stephan Falter, Martin Spies, Giovanni Zappavigna, Lorenzo Parrotta

ID658, *Applications of Pulsed Eddy Current Testing (PECT) in Thickness Measurements on Components with Coatings or Insulation,* Alessandro Magni, Marco Casaril

ID660, *Re-Machine – Multimodal Inspection of Wind-Turbine Bolts for* Reusability, Kevin Schmitz, Thomas Schwender

ID663, *Comparing Infrared Thermography and Digital Image Correlation for Fatigue Crack Initiation Detection in Cold-Spray Repaired Aluminium Specimens.*, Somsubhro Chaudhuri, Sruthi Krishna Kunji Purayil, Mauro Madia, Sören Nielsen

ID711, *Eddy Current and Ultrasonic Near-Surface Flaw Detection in Additively Manufactured Ti-5Al-5V-5Mo-3Cr*, Brendan Halliday, Kate van Herpt, Mohammad E. Bajgholi, Allyson Eastmure, Fan Liu, P. Ross Underhill, Catalin Mandache, Thomas Krause

ID822, *Multi-Modal Non-Destructive Evaluation of Lightning Strike Damage in CFRP Composites Using Thermography and X-ray Computed Tomography*, Sreedhar Unnikrishnakurup, Vinod Kumar, Jonathan Zheng, Santhakumar Sampath, Zi Wen Tham, Zhang Lei, Siok Wei, Warintorn Thitsartarn, Andrew Ngo

ID852, *Sim-MDL: Multimodal Deep Learning for TBC Evaluation using Infrared and Terahertz Imaging NDE*, Sruthi Krishna Kunji Purayil, Krishnan Balasubramaniam

ID874, *AI-driven Prediction of Structural Steel Mechanical Properties using Ultrasound and Eddy Current Testing*, Zaki Bin Muhammad Sham, Shagea Alqawzai, Haris Sufyan Bin Mohamad, Thi Qui Nguyen, Mingshan Zhao, Zhang Linyun

ID876, *AI-Driven Prediction of Structural Steel Mechanical Properties using Chemical Compositions and Hardness*, Zaki Bin Muhammad Sham, Shagea Alqawzai, Haris Sufyan Bin Mohamad, Thi Qui Nguyen, Mingshan Zhao, Zhang Linyun

SS12
Active Thermography Techniques for NDT and Material Characterization

Wednesday, June 17th, 2026 – Room 12.A (all day)
Thursday, June 18th, 2026 – Room 12.A (morning)

ID166, *Measurement of Metallic Material Grain Size Using Total Focusing Ultrasonic Images*, Weixin Wang, Paul Wilcox, Jie Zhang

ID230, *Comparison of Lockin- and Pulse Phase Thermography for Foreign Object Detection in Prepreg Ply Assembly*, Manuel Ederer, Santhosh Ayalur-Karunakaran, Gerhard Traxler

ID245, *Rapid Quantitative Assessment of Lightweight Metal Additive Structures Using Thermoelastic Stress Analysis*, Joshua Rodrigues, Matthew Pelosi, Wayne Foster, Simon Barter, Raj Das

ID249, *Active Infrared Thermography for the inspection of thermoplastic composite welds*, Daniella B. Deutz, H. Patrick Jansen

ID304, *Non-destructive Evaluation of Microcracks in WC-10Co-4Cr (HVOF) Coatings Using Eddy Current Testing and Induction Thermography*, Niklas Steinbrecher, Hans Jürgen Maier, Sebastian Barton

ID329, *Coupling Eddy Current and Thermal Diffusion Simulation to Model Induction Infrared Thermography in CIVA*, Marc Bakry, Rutger A. Biezemans, Edouard Demaldent

ID395, *FK-VWT: Frequency Kernel Based Virtual Wave Thermography for Composite Panels*, Xiangyu Wang, Mathias Kersemans, Anastasiia O. Krushynska, Ihsan E. Bal, Qiuji Yi, Liangliang Cheng

ID467, *Active Thermography with Pulse Compression for Thermally Fast Materials*, Julien Lecompagnon, Rocco Zito, Stefano Laureti, Mathias Ziegler, Marco Ricci

ID469, *Superpixel Graph Attention Network for Crack Segmentation in Complex Components Using Automated Laser Thermography*, Sruthi Krishna Kunji Purayil, Rita Fioresi, Michela Lapenna, Philipp Daniel Hirsch, Julien Lecompagnon, Mathias Ziegler

ID626, *Towards Non-destructive Prediction of Porosity-induced Mechanical Property Variations in L-PBF AlSi10Mg via Pulsed Laser Thermography*, Giuseppe Dell'Avvocato, Veronica Pocetta, Paolo Bison, Stefano Rossi, Umberto Galietti, Giovanni Ferrarini

ID662, *Crack Characterization in Ferromagnetic Steel Using Inductive Thermography*, Ester D'Accardi, Giuseppe Dell'Avvocato, Davide Palumbo, Umberto Galietti, Beate Oswald-Tranta

ID671, *Emissivity Compensation for Thermographic Inspection of Grey Cast Iron Components*, Philipp Daniel Hirsch, Sruthi Krishna Kunji Purayil, Nils Scheuschner, Julien Lecompagnon, Rainer Krankenhagen, Mathias Ziegler

ID686, *Exploiting Mismatched Filter for Barker Code Pulse Compression Thermography*, Rocco Zito, Julien Lecompagnon, Stefano Laureti, Mathias Ziegler, Marco Ricci

ID702, *Defect Segmentation Using Deep Learning to Reduce the Complexity of Pulsed Thermography Data*, Julian Grimm, Gerald Zauner, Günther Mayr, Gernot Mayr

ID832, *Online Evaluation of Ultrasonically Welded Carbon Fiber Reinforced Thermoplastic Laminates by Means of Infrared Vibrothermography*, Mattia Tornabene, Massimiliano Russello, Giuseppe Pitarresi

ID836, *Active Thermography for Quality Control and Defects Detection in PEKK TPMS Lattice Structures*, Fabio Distefano, Gabriella Epasto, Fabrizio Freni, Roberto Montanini, Mario Valenti

ID837, *Defects Characterization by Using a Deep Learning Approach on Thermal Data*, Tiziana Matarrese, Luis Antonio Felipe Sesé, Ángel Jesus Molina Viedma, Elías López-Alba, Francisco Alberto Díaz Garrido, Umberto Galietti, Davide Palumbo

ID879, *Linking Diffusive Fields to Virtual Waves as Their Propagative Duals*, Peter Burgholzer, Lukas Gahleitner, Guenther Mayr

A.3
Industrial Technologies and Processes

Wednesday, June 17th, 2026 – Room 12.B (all day)
Thursday, June 18th, 2026 – Room 12.B (all day)

ID120, *Penetrant Testing = Advantages of using BIODEGRADABLE Penetrants (Health, Safety, Environment)*, Fabien Cormier

ID128, *Online Testing of ERW-Welded Tubes with PAUT*, Wolfram Deutsch, Igor Martini, Massimo Cadeddu, Vasyl Tomnyuk, Timur Sayfullaev, Marius Weiler

ID157, *NDE4.X - Next Level of NDT Automation in Aerospace*, Thomas Gramberger

ID184, *Quantum Physics: New Light in Nondestructive Testing*, Giuseppe Nardoni, Marco Feroldi, Pietro Nardoni

ID205, *Portable, Battery-Powered X-Ray System with a Compact Wired X-Ray Tube and Small Focal Spot*, Sebastian Eckel, Markus Schmid, Berthold Schreieck, Vladimir Alekseychuk, Alexander Alekseychuk

ID213, *Surface Inspection of CFRP Composites Using High-Frequency Air-Coupled Ultrasonic Testing*, Héctor Calas, Tomas Gómez Álvarez-Arenas, Thomas Partiot, Hervé Saulais

ID224, *Online Monitoring of Phase Transformation Evolution in Hot Rolled Steels during Controlled Cooling*, Haibing Yang, Frenk van den Berg, Jos Mosk, Simon Kerley, Mark Dolby, Joe West, Anthony Peyton, Claire Davis

ID225, *Improved Process Control of High-strength Steels by Microstructure Monitoring with an Inline XRD Gauge*, Frenk Van den Berg, Ramon Speets, Cor Jan Boeder, Cornelia Ionescu, Martin Huisert, Suzan Bruinsma, S. Melzer, Horst Krauthäuser, Tobias Terlau

ID258, *Ultrasonic Inspection of Complex Surfaces Using Novel Coupling Materials*, Julián Fernández-Avilés Gómez, Pablo Resa, Amador Sillero, Luis Elvira, Carmen Durán, Alexandre Delannoy, Èric Torra

ID262, *Signal Processing using Synthetic Aperture Focusing Technique for Ultrasonic Testing of Round Bars*, Kazuki Terada, Yutaka Matsui

ID294, *Magnetic Characterization of Structural Steels under Different Heat Treatment using Pulsed Eddy Current Testing*, Athanasios Kyrgiazoglou, Anastassios Skarlatos, Dimitrios Fasnakis, Maria Pappa

ID338, *3D Weld Seam Sensor for the Detection of all types of Defects on the Material Surface*, Jun Zhao

ID357, *Laser Ultrasound in Wire Arc Additive Manufacturing: Imaging of Internal Structure and Defects*, Norbert Huber, Maximilian Hoffmann, Gernot Mauthner, Bernhard Reitinger

ID378, *Development of an Eddy-current Probe for Quality Control of Conductive 3D Printing by FEM Modelling*, Till Schulze, Maren Rake, Martin Schulze, Nataliia Gromberg, Henning Heuer, Welf-Guntram Drossel

ID397, *New Technologies for Improving the Electroacoustic Performance of Transducers*, Galaad Pereyron, Philippe Dumasva

ID403, *New Solutions Focused on Phased Array for the Inspection of High-Density Polyethylene*, Justin Wendorf, Florin Turcu

ID492, *Ultrasonic NDE for Real-Time Monitoring of Vulcanization in Nitrile Butadiene Rubber*, Debasis Datta, Subhasis Mondal

ID500, *Advanced Ultrasonic Phased Array Inspection System with PaintBrush Technique for the Gapless Testing of Seamless Steel Pipes*, Sanjeevareddy Kolkoori, Thomas Weise, Daniel Koers, Claudia Jasperneite, Franz Eggbauer, Friedrich Lorenz

ID510, *Eddy Current Scanner for Case Depth Measurement of Induction-Hardened Axle Bars and Stem Shafts*, Hooman Dejnabadi

ID514, *Acoustic Resonance Testing (ARS/ARI) for Non-Destructive Evaluation of Cast and Advanced Manufactured Metal Components*, Hooman Dejnabadi

ID519, *Sub-THz Radar Line Camera for Inline NDT Applications*, Sven Leuchs, Christian Krebs

ID536, *Comparative Analysis of Non-Destructive Methods for Determining the Thickness of Welding Overlay (Cladding) in Alloy 625 and AISI 316*, Erik Del Forno, Nicola Marasco, Stefano Verdino, Riccardo D'Amico, Dario Tonali, Enrico Vignati

ID563, *Beyond the HP/11 Reference: Architectural Evolution of Minifocus X-Ray Sources for Future NDT*, Arnaud Sottas, Marcel Odermatt

ID565, *Advanced Phased-Array Methods for the Automated SAW Inspection with Wheel Probes*, Christof Breidenbach, Prashanth Kumar Chinta, Stephan Falter, Jörg Ininger, Christian Sturm, Thomas Würschig

ID654, *TFM Inspection in lieu of RT on Welds of Thin WT Pipes in Stainless Steel*, Angelo Bruno, Pasquale Miniello

ID681, *Automatic 3D Analysis of Asphalt Mixtures using High-speed CT & AI Segmentation*, Daniel Cuadra-Rodriguez, Eusebio Solorzano, Lorena Palomo Luis, Jose Simón Grau, Victor Garcia Rabadán, Gloria Motos Cascales

ID723, *A Modular Phased Array–Based In-Line UT System Enabling High-Speed, High-Reliability NDT*, Herve Saulais, Cyril Thibault, Andrzej Wiatrek, Dominique Braconnier

ID724, *RopeWatcher: Advancing Predictive Maintenance through Continuous Magneto-Inductive Rope Monitoring*, Bruno Vusini, Daniel Rossi, Enrico Furno

ID729, *In Line Inspection of Hex Bars with Advanced Ultrasonic Phased Arrays*, Cyril Thibault, Jorn Bolten, Wolfram Deutsch, Dominique Braconnier

ID734, *On-Site Calibration Breakthrough for Phased Array UT Systems*, Dominique Braconnier, Wolfram Deutsch

ID788, *Non-Destructive Evaluation of Micro-Cracks Using Differential Electromagnetic Focusing Vision*, Gaige Ru, Bin Gao, Jiale Ye

ID866, *The New DGZfP Guideline D8 on Displays for Image Evaluation, what is the Message for the User?*, Uwe Zscherpel, Klaus Bavendiek

SS17
Drone for NDT Industrial Applications

Wednesday, June 17th, 2026 – Room GS.A (morning)

ID358, *Transition from Internal Visual Testing (VT) to External Robotized Phased Array Ultrasonic Testing (PAUT) for Periodic Pressure Vessel Examinations in Switzerland*, Carlo Romito, Stefano Cipolla, Francesco Centenaro

ID448, *Target 3D for Visual Testing with Drones*, Emanuele Artenio, Giuseppe Augugliaro, Riccardo Balistreri, Davide Gattamelata, Francesco Giacobbe, Omero Spanu

ID508, *Opportunities and Criticalities in Infrared Inspection of Photovoltaic Modules by UAVs*, Hamza Nasri, Jamel Riahi, Silvano Vergura

ID569, *Technological Challenges in Drone Based NDT Contact Inspections*, Simone Panza

ID674, *Drone-Based Multi-Modal Inspection of Wind Turbine Rotor Blades*, Ramanan Sridaran-Venkat, Michael Stamm

ID862, *Enhanced Aircraft Visual Inspection: Improving Defect Detection with Deflectometry, AI Assistance, and Synthetic Data Augmentation*, Raphaël Viards, Henri Marticou, Jérémy Pirard

SS18
Drone and NDT for cultural heritage and civil infrastructures

Wednesday, June 17th, 2026 – Room GS.A (morning)

ID127, *Drone-Based Contact NDT for Concrete Structures*, Claudia Thurnherr, Benoît Jordan, Daniel Algernon

ID848, *Multi-Hyperspectral Imagery for Semi-Automatic Decay Identification: the Case Study of the Cavour Canal Historic Water-Bridge*, Alessandra Spadaro, Francesca Matrone, Ramin Rashidi Alavijeh, Andrea Maria Lingua

ID886, *Numerical Integration of Geomatic Surveying and Infrared Thermography for Non-Destructive Documentation of Historic Masonry*, Anna Forte, Francesca Trevisiol, Giulia Fiorini, Gabriele Bitelli

ID920, *Enhancing Aerial Non-destructive Tests with Controlled Sliding for Concrete Inspection*, Simone D'Angelo, Vincenzo Lippiello

SS19
Barkhausen Noise Testing method

Wednesday, June 17th, 2026 – Room GS.A (afternoon)

ID217, *The Study of Time-Dependent Effects of Barkhausen Noise Reference Samples*, Suvi Santa-aho, Aki Sorsa, Jari Olavison, Minnamari Vippola

ID494, *Non-Destructive Characterization using Barkhausen Noise to Measure Residual Stresses of Induction Hardened Steel Components*, Jonas Holmberg, Per Lundin, Johan Wendel

ID605, *A Feasibility Study on MBN-Based Stress Evaluation of Cable-Based Bridges*, Kwang-Yeun Park, Joo-Hyung Lee, Changbin Joh, Ji-Young Choi, Imjong Kwahk

ID694, *Influence of Magnetizing Core Materials and Size on the Detection Sensitivity of Grinding Burns using Magnetic Barkhausen Noise*, Mikel Cuenca-Ariza, Ane Martinez-de-Guereñu, Kizkitza Gurruchaga

ID809, *Magnetic Rotational Permeability (MRP) for Mechanical Stress Estimation*, Yves Tene Deffo, Tetsuya Uchimoto, Benjamin Ducharne

ID813, *Non-Destructive Determination of Surface Residual Stresses in Electron Beam Welded AISI 410 Plates using Magnetic Barkhausen Noise Technique*, Hasan İlker Yelbay, Cemil Hakan Gür

SS21
Aerospace

Thursday, June 18th, 2026 – Room 11.A1 (all day)

ID268, *Raw Material Ultrasonic Inspection for Aerospace: Inspection of the "Dead Zone" Using Shear Waves*, Dimitri Olivero, Dario Seni, Lucas Ascenzi

ID327, *Computed Tomographic Inspection in the Aerospace Industry: Guidelines for Standardize the Inspection Process and Image Quality Parameters Study According to Italian Experience*, Francesco Mascolo, Liberata Furente, Sara Guelfo, Stefano Benuzzi

ID376, *High-Resolution Immersion Ultrasonic Testing of Critical Aerospace Parts in MRO Operations*, Iris Buchmeier-Hevroni

ID385, *Practical Implementation of Phased Array Ultrasonic Testing (PAUT) in Automated Disc Inspection Systems*, Michael Bron, Elena Miltreyger

ID490, *Inspections After Blending-out Scratches on Aircraft Fuselage Made of Aluminium Alloy*, Guillaume Ithurralde, Patrick Metayer, Mohamed Sayeh

ID554, *A Comprehensive Framework for Pyroshock Testing of Aerospace Equipment*, Luca Viale, Alessandro Paolo Daga, Alessandro Fasana, Luigi Garibaldi

ID564, *Influence of the Surface Finish of a Metal Bar Related to the Ultrasonic Surface Resolution and the Measurement of its Roughness*, Enzo Di Liddo, Francesco Piazza

ID575, *Eddy Current In-Situ Monitoring for Process and Quality Assessment of Additive Manufacturing (AM) Laser Powder Bed Fusion (L-PBF)*, Arber Caslli, Andrea Gianneo

ID576, *Film Replacement in Radiographic Testing: Case Studies from Aerospace Applications*, Andrea Gianneo

ID649, *Transferring Qualification acc. to EN 4179 / NAS 410 Qualification Standards*, Tomas Zavadil

ID652, *Implementing Annual Proficiency Review acc. to EN 4179 / NAS 410 Qualification Standards*, Tomas Zavadil

ID769, *EN4179:2026 / NAS410 rev.6 Background and Scenario of the New Standard for Aerospace NDT Personnel Qualification and Approval*, Fabrizio Montagnoli

ID784, *Automated Analysis of Ultrasonic Data for Complex CFRP Aerostructures Using Adaptive Segmentation*, Julien Walter, Alexandre Beausoleil, Elhadji Barra Ndiaye, Loïc Séguin-Charbonneau

ID829, *Fused Ultrasonic Tomography Imaging Technique for Gas-Liquid Distribution in Spacecrafts' Tank Based on RAPID and TFM*, Kunyou Jiang, Chengguang Fan, Xiaozhen Zhang, Zongyu Wu, Yong Zhao

ID870, *Aerospace Immersion UT Inspections with Adaptive TFM*, Jeremy Gaumer, Gavin Dao

ID907, *Ensuring NDT Safety in Cryogenic Propulsion: An Analysis of Modern Oxygen Compatibility Standards and Procurement Challenges for Liquid Penetrant Materials*, Domenico Telesca, Liberata Furente, Alessio Franchina

ID953, *Development of Radial NDT Inspection for Electron Beam Runout Welding in Helicopter Components*, Francisco Carrasco, Arnaud Desmis

SS13
NDE 4.0

Thursday, June 18th, 2026 – Room 11.A2 (all day)

ID191, *The OpenNDE Data Format*, Vincent Bergeaud, Steve Holland, Terrill Massey, Andreas Schumm, Paul Wilcox

ID269, *Trends in the Digitalisation of NDT*, Martin Wall, Zubeir Ebrahim Saib

ID291, *Digital Integration of a Robotic NDT System Through a Real-Time Data Pipeline*, Faris Nafiah, Mael Sautin, Andrew Kelly

ID424, *Advancements in Nondestructive Testing and Monitoring Process*, Christian Conrad, Yasmine Gabi, Thorsten Mueller

ID464, *ONDE (Open Non Destructive Examination) File Format – Technical Choices*, Vincent Bergeaud, Sylvain Chatillon, Steve Holland, Terrill Massey, Quentin Mistral, Andreas Schumm, Paul Wilcox

ID579, *Implementation of DICONDE for the Storage of Ultrasonic Waveform Data: A Core Enabler for NDE 4.0*, Johannes Vrana, Daniel Schaefers, Jacob Rühe, Wolfram Deutsch

ID600, *Assessing the Accuracy and Precision of XR Tracking for NDT Inspection*, Daniel Conniffe, Adam Fletcher, Anthony Peyton, Alex Salem, Jim Skelton

ID622, *Deep Learning Based Automatic Analysis of Multimodal TFM data in Elbow-Tube Weld Junctions in Nuclear*, Roberto Miorelli, David Roue, Sébastien Robert

ID624, *Simple Approach for Testing Distance Detection during 3MA-II lift-off Measurements on Moving Components Based on PCA and SVM*, David Böttger, Yasmine Gabi

ID661, *NDE 4.0 and Artificial Intelligence: Partnership and Evolution of AI Applications*, Rafael Martinez-Oña

ID701, *The NDE Value Alliance: Architecting the Trust and Interoperability Framework to Accelerate NDE 4.0 through Collaborative Standardization*, Johannes Vrana, Ripi Singh, Tjibbe Bouma, Niels Westendorp, Holger Haßdenteufel, Bernd Valeske

ID704, *The Evolution of NDT Documentation: Establishing a Machine-Readable Language for NDE 4.0 through the DX-Schema Project*, Johannes Vrana, Frank Leinenbach, Thomas Engel, Sascha Eichstädt, Michael Melzer

ID844, *Ultrasound Software based Tomography for Porosity and Defect Characterization in Complex Composite Structures*, Piotr Karwat, Marcin Lewandowski, Krzysztof Dragan

ID896, *Deployment Relevant Uncertainty Quantification for NDE 4.0 Applications*, Zi Li, Lei Peng, Yiming Deng

ID945, *The Positive Effect on Compliance, Security, and Efficiency by the use of State-Of-The-Art NDT Management Software*, Achim Hansen, Andreas Thielen

SS8
Non-destructive testing and evaluation of composite materials

Thursday, June 18th, 2026 – Room 11.B1 (all day)

ID192, *Comparison of Terahertz and Infrared Thermography Methods for Detecting Defects in Aramid Fiber Reinforced Composites*, Waldemar Swiderski, Tomasz Krzeminski

ID218, *Measuring Cracks and Corrosion in Aluminium Backup Structure through Composite and Low Observable Coating*, H. Patrick Jansen, Arnoud F. Bosch, D. Jacco Platenkamp

ID226, *Automated NDT Solutions for Complex Aerospace Components: Advancing Flight Safety and Inspection Efficiency*, René Sicard, Ahmad Chahbaz

ID234, *Characterization of Porosity and Pore Geometry Using Acoustic Resonance Analysis*, Linus Littner, Igor Solodov, Marc Kreutzbruck

ID279, *Adaptive Fusion Imaging for Delamination Defects in GFRP Composites Based on Terahertz Time-Domain Spectroscopy*, Zenghua Liu, Rui Li, Yanping Zhu, Xiaoran Wang, Xin Zhao

ID280, *Guided Wavefield Damage Imaging Method via Two-Dimensional Multi-Frequency Sparse Wavenumber Spectrum Reconstruction*, Zenghua Liu, Xiaoyu Liu, Yanping Zhu

ID316, *Simultaneous Thickness Measurement of Multiple Bondlines using Transmission Measurements*, Arno Volker, Patrick Jansen

ID390, *Experimental and Numerical Investigation of Orientation Dependent Eddy Current behavior in CFRP Laminates*, Atul Sharma, Robert Hughes

ID399, *Advancements in Direct Velocity Mapping Applied to Composite Panels*, Jan-Willem Vrolijk, Emiel Hassefras, Marco Mout, Maurits van der Heiden, Egon Merks-Swolfs, Quincy Martina

ID422, *Acoustic Emission and Distributed Backface Strain Monitoring of Crack Growth in Composite Adhesively Bonded Joints Under Mode II Fatigue Loading*, Alessandra Panerai, Benedetta Oneda, Luca Michele Martulli, Andrea Bernasconi, Michele Carboni

ID463, *Defect Reconstruction via Total Focusing Method and Phase Coherence Imaging for Materials Exhibiting Elliptical Anisotropy*, Martin Spies, Prashanth Chinta, Stephan Falter

ID535, *Development of Lamb Wave and CNN–Integrated Damage Identifier for GFRP Composites*, Yonghee Lee, Yong Suk Oh, Juyeop Park, Donghoon Kang

ID586, *Feasibility of a Scalable All-Optical Network Architecture for Non-Destructive Testing of Composites*, Benoit Quesson, Alvaro Gonzalez Jimenez, Lorenzo Scherino, Marie Zandi, Daniele Piras, Wim de Jong, Lun Cheng, Rob Jansen, Paul van Neer

ID588, *Applicability of Air-Coupled Rayleigh Waves for Inspection of As-Printed BAAM Components*, Ander Dominguez-Macaya, Nekane Galarza, Jon Olaizola, Jose Manuel Abete

ID629, *Improved Sensitivity Fiber Optic Readout System Based on Pi-Shifted Fibre Bragg Gratings and Mode Locked Lasers for Composite Structures Inspection*, Alvaro Gonzalez Jimenez, Benoit Quesson, Lorenzo Scherino, Marie Zandi, Daniele Piras, Wim de Jong, Lun Cheng, Rob Jansen, Paul van Neer

ID685, *Automated Damage Detection in Carbon-Fiber Reinforced Polymers using Air-Coupled Ultrasound and Neural Networks,* Olga Popovych, Kher Wei Lai, Ana Menendez Orellana, Christian U. Grosse

ID739, *Non-Destructive Tests on DLP-Based 3D-Printed h-BN/Graphite Polymer Composites*, Marco Fortunato, Angelo Tatì, Daniele Mirabile Gattia

ID783, *Ultrasonic Probe Mimicking Technique and its Application to Porosity Measurement in Composite Materials*, Julien Walter, Alexandre Beausoleil, Olivier Arès

AM.2
Automation and Robotics

Thursday, June 18th, 2026 – Room 11.B2 (all day)

ID142, *Automated NDT Inspection for Spot Welds in Collaborative Mode and with AI Driven Software*, Christian Wagner, L. Baumgart, S. Klink

ID161, *Development of NDT Methods and Three-Dimensional Diagnostic Techniques with a Robotic Automation*, Paola Carlorosi

ID200, *Inline Ultrasonics Measurements of Pipes and Tubes: From an Inspection Machine to a Quality Tool*, Helmut Breidenbach, Stephan Falter, Renjith Cheruthazhathu Ravindran Nair, Thomas Würschig

ID204, *PAUT Testing System for Large, Seamlessly Rolled Rings*, Wolfram Deutsch, Jürgen Närmann, Jörn Bolten, Timur Sayfullaev, Marius Weiler

ID348, *Challenges for Automated Ultrasonic Testing of Forged Parts with Immersion Technique*, Thomas Rehfeldt, Alexander Köck, Andreas Weber, Sandra Motschiedler, Jeanne Bargsten

ID377, *Implementation of a Semi-Automated Phased-Array Mapping Solution for Flow Accelerated Corrosion Monitoring*, Eliot Chaize, Grégoire Benoist, Valentin Perret, Guillaume Neau

ID394, *Adaptive Laser-Induced Phased Arrays for Volumetric Imaging of Defects in 3D Curved Surfaces*, Rafael Fuentes-Dominguez, Martin Todd, Richard J. Smith, Matt Clark

ID460, *Climbing Robots: A New Era for NDT on Tall Structures*, Jack Cornes, Jean-Marie Henault

ID475, *Remote-Support Technology for Data Interpretation and Services in Automated UT: The Autosonic™ Use Case*, Erik Stara, Luca Scaccabarozzi, Oliver von Trzebiatowski, Marco Induti

ID499, *Developing an Adaptive Testbed for Robotic Inspection*, Liam Murray, Tyler Lesthaeghe, Matthew Cherry, Andrew Gillman, Sean Donegan, LoriAnne Groo

ID613, *Advanced Automated PAUT Systems Utilizing Special Immersion Testing Techniques*, Radek Salač

ID614, *Advanced Automated Ultrasonic Systems Utilizing Modern Technologies*, Radek Salač

ID636, *Robust Virtual Encoder: using Ultrasound Data for Compensation of Depth Variations in Camera-Based Odometry*, Matheus F. Dário, Fernando H. R. Caetano, Daniel Santin, Henrique M. Guerra, Huriel A. Dos Santos, Thiago E. Kalid, Tatiana de A. Prado, Gustavo P. Pires, Thiago A. R. Passarin

ID645, *A Hybrid Phased Array Ultrasonic Testing Methodology for A1106 High Manganese Steel using DMA Longitudinal and Creep Wave Techniques*, Sajeesh Kumar Babu, Thiruvenkadam Sugumaran

ID764, *Advances in Ultrasonic Corrosion Mapping Through Integrated Acquisition Architectures*, Federico Zottig, Cyril Thibault

ID775, *Performance Evaluation of Ultrasonic Sparse Array Networks – Implications for Robotic Inspection of Large Areas*, Bruce W. Drinkwater, Anthony J. Croxford, Xudong Niu, Michael Todd

ID861, *Development and Validation of an Eddy Current Instrumented Pipeline PIG for Fatigue Crack Detection in Girth Welds of Clad Pipes*, Lucas B. Campos, Rafael W. F. dos Santos, Lucas M. C. da Silva, Diogo B. C. Lima, Miguel A. Freitas, Cesar G. Camerini, Gabriela R. Pereira

ID930, *Multi-Robot Computed Tomography Platform for Adaptive Non-Destructive Evaluation*, Josef Uher, Jana Zálišová, Jakub Veselý, Michal Pech, Filip Dominec

HF.1
Qualification, Certification, Standards and Training

Thursday, June 18th, 2026 – Room 11.C1 (all day)
Friday, June 19th, 2026 - Room 11.C1 (morning)

ID115, *Improving Inspector Training by Incorporating Artificial Defect Data in Guided Wave Testing*, Diana Olivia Martinez-Trejo, Brian Pavlakovic, Keith Vine

ID136, *Cloud Platform for Ultrasonic Instruments Calibration and Certification*, Abdelmaboud Elbasyouny, Stephan Falter, Johannes Büchler, Alexander Fritsch

ID210, *Evaluation of Magnetic Field Impact on Workers during Magnetic Particle Inspection*, Eleonora Fontò, Michele La Bianca, Luca Giaccone, Fabio Freschi, Aldo Canova

ID260, *Characterization of Flexible Digital Detector Arrays using ASTM E2597/E2597M-22*, Katie Carpenter

ID290, *The Evolution of Non-Destructive Testing (NDT) in Albania: From Post-War Foundations to European Integration (1945–2025)*, Konda Enkelejda, Sotja Dhimitraq, Zeqo Migena

ID293, *Image Quality Indicator for XCT Systems*, Anne-Francoise Obaton, Dominik Brouczek, Martin Schwentenwein, Denise Mödder, György Attila Harakály, Marcus Oel, Jens Luebbehuesen, Uwe Ewert

ID402, *New Standards and Requirements for Quality Assurance in Industrial Computed Tomography*, Uwe Ewert, Holger Roth, Anne-Francoise Obaton, Alain Kueng, Josephine Gutekunst, Ulrich Neuschaefer-Rube, Thomas Blumensath, Fritz Hoerauf, Marko Katic

ID439, *French Certification of NDT Operators for the Detection of Reinforcement in Concrete Structures*, Alexandre Boule, Bernard Quénee, Jean-Paul Balayssac, Nathalie Cordier, Sophie Gwinner, Christopher Ostrowski, Xavier Dérobert, Bernard Vincent, Lucas Bourreau, Jules Le Bec, Mehdi Sbartai, Sandra El Tahir, Stéphane Geneau

ID445, *Traceability and Operator Assistance System for Manual UT Non-Destructive Testing*, Florence Grassin, Michel Cardoso, Vincent Saint-Martin, Vincent Bergeaud, Julien Banchet, Cécile Mayau

ID468, *Qualification and Certification of NDT Personnel in Civil Engineering (NDT-CE)*, Sascha Feistkorn

ID517, *DX-Schema – Standardized Modular Document System for a "digital-first" Quality Infrastructure*, Frank Leinenbach, Johannes Vrana, Thomas Engel, Sascha Eichstädt, Michael Melzer

ID545, *EddyWeb – One for All!*, Gerhard Mook, Yury Simonin

ID651, *Strengthening NDT in Civil Engineering through Training and Harmonized Qualification Frameworks: Experience from an IAEA–RCA Initiative*, Ilham Mukriz Zainal Abidin, Gerardo Maghella Seminario, K. Phaokhamkeo

ID653, *AI Qualification and Implementation in RPVHI in Sweden*, Rickard Samuelsson Jerndahl, Iikka Virkkunen, Gustav Holmer

ID679, *Human Factor and Communication Processes in Technical Training: A Systemic Approach to Adult Learning in Non-Destructive Testing*, Marina Pomo, Emma Selene Ixchel Iturriaga Sauco

ID705, *Digital Training: How can Simulators Enhance Trainees' Learning?*, Rafael Iglesia, Benoit Puel, Fabrice Foucher

ID720, *Strengthening Global Capacities in Non-Destructive Testing for Industry, Cultural Heritage, Civil Engineering and Disaster Recovery: Recent Programmatic Developments at the IAEA*, Hannah Asamoah Affum, Gerardo Maghella Seminario, Shangyuan Liu

ID903, *On the Basis of a Standard for NDT-CE Operators Training*, Sebastian Laprida, Cesar Belinco

ID942, *Availability and Procedure for Certification acc. to ASNT 9712 in Europe*, Tomas Zavadil, Paul Lang

ID947, *Artificial Intelligence as a Communicative Partner in Technical Communication: A Systemic Approach to Information Management and Documentation in NDT*, Emma Selene Ixchel Iturriaga Sauco, Marina Pomo

ID951, *Introducing the ASNT 9712 Certification Program to Europe: A Performance-Based ISO 9712 Certification Approach*, Paul Lang, Tomas Zavadil

ID956, *A New ISO 9712 ET Certification Structure for a Modern World – Including ISO 9712 Eddy Current Array Training / Certification*, James Watson

ID957, *Safety Management System (SMS) Applied to the NDT*, Giuseppe Di Sorbo, Valter Capitani, Daniele Petrucci

SS15
NDT Reliability

Thursday, June 18th, 2026 – Room 11.C2 (all day)

ID162, *Fatigue Cracks: Criteria to Overcome the Detection Limit in the Early Stage*, Giuseppe Nardoni, Marco Feroldi, Fabio Savoldi, Diego Nardoni

ID165, *Deep Learning-Supported Automated Evaluation of Dye Penetrant Inspection Results in Compliance with EN 1371-1 and ASME Section VIII*, Peter Haupts, Sebastian Pose, Mohieddine Jelali

ID194, *Methodologies for Verifying the Optimal Magnetic Field in the Fluorescent Magnetic Particle Method,* Massimo Capriolo, Riccardo Banin, Elisa Ferrari, Pierangelo Crippa

ID356, *Investigating the Quality of Grouting for Tendon Ducts using Numerical UT-Simulations,* Fabian Dethof, Francesca Marsili, Sylvia Keßler

ID359, *Nonlinear P-POD: Enhancing Probability of Detection in X-ray Thickness Inspections*, Kerstin Kirschbaum, Matthias Goldammer, Christian U. Grosse

ID379, *Performance Comparison of Total Focusing and Phased Array under Practical Inspection Uncertainties*, Benoit Jordan, Carlo Romito, Daniel Algernon

ID384, *European Reliability Framework: A Bridge between the Different Systems in NDT and the Key for NDT 4.0*, Daniel Kanzler

ID487, *Tfm–Pci Combination: A New Frontier in Ultrasonic Imaging*, Salvatore Gabriele Torregrossa, Rosario Molica Nardo, Davide Campanella

ID602, *Lift-off Trajectory Analysis for Eddy Current Detection of Millimetre-Scale Cracks in Curved Geometries*, Jingyuan Yang, Qiuping Ma, Guiyun Tian, Cesar Camerini, Qiuji Yi

ID630, *Fatigue Damage Is Not a Crack: Why NDT Must Inform Decisions, Not Just Detection*, Francisco Garcia Torres

ID672, *Human Factors in the Ultrasonic Testing of Railway Axles: Effects of Rare Signals and Automation Support*, Marija Bertovic, Momo Hegeler, Stefan Lichtnekert, Linda Onnasch

ID693, *Microfocus Gantry CT – Innovative Computed Tomography for Use in Research and Industry*, Jens Luebbehuesen, Adrian De Riz, Gábor Szabó

ID717, *Challenges of Remote Camera MPI/FPI Inspections*, Miroslav Šnírer, Patrik Backo, Radek Salač

ID804, *A Novel Method for Fatigue Crack Size Quantification in Spacecraft Structures under Variable Temperature Environment Based on Information Entropy*, Xiaozhen Zhang, Chengguang Fan, Kunyou Jiang, Zongyu Wu, Yong Zhao, Quan Chen, Wenlong Zhang

ID810, *Quantitative Monitoring Method for Hydrochloric Acid Corrosion Based on Lamb Waves*, Xiaozhen Zhang, Chengguang Fan, Kunyou Jiang, Zongyu Wu, Yong Zhao, Quan Chen, Wenlong Zhang

ID941, *Construction of a Phased Array Ultrasonic Testing (PAUT) Performance Demonstration (PD) System for Petrochemical Plant Facilities in Korea*, Sungjong Cho, Hyunjun Kim, Ik Keun Park, Young Min Kim, Byeong Jik Jeon, Minjoo Kim

A.1
Civil and Cultural Heritage

Thursday, June 18th, 2026 – Room 11.D1 (all day)

ID107, *Investigating the Suitability of Galena (Lead Glance) as a Construction Material for Radiographic Bunkers*, Tejas N. Ingale

ID114, *Determining the Suitability of using X-Ray Fluorescence for Inspection of Archaeologically Excavated Soil Samples*, Tejas N. Ingale

ID154, *Multimodal NDT Assessment of Concrete Structural Elements before Re-use*, Ernst Niederleithinger, Jelena Bijeljic, David Ringeloth, Oleksandr Al Shboul, Iurie Curosu

ID214, *Autogenous Healing of Concrete Assessed through Rayleigh Waves*, Gerlinde Lefever, Didier Snoeck, Dimitrios G. Aggelis

ID231, *Structural and Geotechnical Investigation Campaign using NDTs of the Camp Nou Stadium in Barcelona for the Remodelling project*, Abel Domato, Lluis Aranda, Aureli Ibars

ID374, *Data-Driven Geostatistical Mapping of Concrete Mechanical Properties from Ultrasonic Measurements*, Douha Lakhouit, Narintsoa Ranaivomanana, Frédéric Taillade, Bertrand Iooss, Jean-Paul Balayssac

ID426, *Dynamic Monitoring of Monumental Artifacts*, Giorgio Sforza

ID587, *Early-Stage Structural Behavior Assessment using Digital Image Correlation*, Giuseppe Pandarese, Simone Forlano, Maria Teresa Calcagni, Alessia Freddo, Francesco Monni, Enrico Quagliarini, Gian Marco Revel

ID659, *Nano-Destructive Chromatographic Analyses of Cultural Heritage Royal Purple Dyeings*, Zvi Koren

ID698, *ITZ Characterization on Thermally Damaged Glass Beads Concrete by Diffuse Ultrasound*, Manda Ramaniraka

ID771, *Evaluation of the Variation in NDT Results in Reinforcing Bars of Concrete Slabs, Subjected to Accelerated Corrosion Processes*, José P. Peña Caravaca, Carlos R. Arganis Juárez, Manuel Antuch, Pamela F. Nelson, Luis F. Desdín, Angeles Díaz Sánchez, Eduardo Robles Piedras

ID849, *Exploration of On-Site Archaeological Excavation Technology Based on Compton Scattering Tomography*, Yongshun Xiao, Chunbo Hu, Dini Lan, Xujian Ouyang, Wenzhong Xu, Peiyuan Ma, Minghao Dong, Junjun Li, Zhiyong Lu, Yongjian Zhang

ID893, *Thermography in Building Analysis: Peculiar Examples and Field of Application*, Marco Maria Parrini, Anna Isabella Piazza

ID917, *Urban Utilities: NDT-CE on a Concrete Structure, after 28 Years with its Construction Halted*, Sebastian Laprida, Florencia Kihara

ID955, *Beyond Rubble: The Indispensable Role of Non-Destructive Testing in Post-War and Post-Earthquake Recovery for Aleppo's Modern and Heritage Structures*, Tarek Krayem, Dario Foppoli

A.2
Energy and Environment

Thursday, June 18th, 2026 – Room 11.D2 (all day)

ID105, *In-Situ Volumetric Inspection of Reciprocating Internal Combustion Engine (RICE) Piston Crowns as a Preemptive Detection Method for Cracking on Threaded Connection*, Terry Haigler, Jeff Henry, Gang Zhou

ID174, *NDE Challenges and Solutions for the Inspection of CO_2 and Hydrogen Pipelines*, Joseph Krynicki, Lujian Peng, Gustavo Gonzalez, Hyun Jo Jun, Alain Chamberlain

ID202, *Methodologies for Assessing Existing Penstocks*, Lorenzo Artaz, Antonino Sannolo, Maurizio Frola, Simone Ferrarese

ID203, *Fatigue Behavior of Hydropower Shafts in the VHCF Regime*, Antonino Sannolo, Maurizio Frola, Simone Ferrarese

ID243, *Some Insights on Conventional and Advanced Ultrasonic Testing of Large Forgings*, Michele Carboni, Fabio D'Urso, Massimo Guerrini, Lorenzo Parrotta, Giovanni Zappavigna

ID244, *Research on the Application of AI to Simulation-Based Micro-Defect Modeling and Diagnosis in Nuclear Power Plant Facilities*, Jaesun Lee, Soomin Lee, Kseniia Barashok, Yeongil Choi, Dokyung Pyun

ID263, *Determination of Focal Laws for Centrifugally Cast Stainless Steel Using Time-Reversal Method*, Shan Lin, Shohji Hajime

ID307, *Application of the Potential Method for Real-Time Crack Detection in High-Temperature Components*, Pavel Mares, Petr Zivny, Marek Mekuta

ID322, *A New Concept for Calibration of Weld Seam Testing for HFI-Pipelines Using Embedded Mid-Wall-Reflectors*, Till Schmitte, Patrick Labud, Lena Thewes, Thomas Orth, Michael White, Christoph Weil, Marco Böcking

ID380, *Complementary Use of Volumetric and Surface Non-Destructive Techniques for the Detection and Evaluation of Stress Corrosion Cracking in Critical Energy Assets*, Angelique Raude, Florin Turcu, Ghislain Morais

ID405, *Direct Current Magnetic Flux Leakage Testing (DCMFL): Improving Repeatability for Oblique Defects by DC-Demagnetization*, Frank Eibofner, Friedrich Hecker

ID610, *Tackling Advanced UT Techniques at High Temperatures*, Tim Stevenson, Maria Giampani, Roscoe Martin

ID631, *Highly Integrated Solution for Corrosion Testing in the Field*, Benjamin Hoemske, Prashanth Chinta, Christoph Deters, Johannes Büechler, Stephan Falter

ID641, *AI-Assisted In-Vessel Visual Inspections*, Thiago Osorio

ID738, *Eddy Current Array for Inspecting J-Welds on the Reactor Vessel Head in Nuclear Power Plants*, Charles Tremblay, Sergio Loffredo, Mathieu Bouchard

ID954, *Digital vs Film Radiography Performance for High-Energy Nuclear Weld Inspection*, Steven Wissels, Johan Grauls

SS20
Technologies for Industrial Inspection Robots

Thursday, June 18th, 2026 – Room 12.C (afternoon)

ID137, *Robot Ultrasonic Testing and CAD-Free Adaptive Scanning of Complex-Shape Metallic Parts for Aerospace Applications*, Alexey Bevetskiy, Andrey Bulavinov, Roman Pinchuk, Michael Okulla, Jens Kiehn

ID223, *Mobile Robot for Inspecting the Inside of Composite Profiles*, Abdalla Shahin, Lukas Hartung, Christian Eitzinger

ID361, *Optimized Methodology for Tomographic Reconstruction in X-Ray Inspection Using the CIVA Simulation Platform*, Victor Bussy, Julie Escoda, Anthony Touron, Marius Costin

ID480, *Cognitive Robotic System for Adaptive Non-Destructive Inspection with Laser Thermography*, Bartosz Hyla, Łukasz Ambroziński, Łukasz Pieczonka

ID561, *Deep Learning Method for Defect Detection for Industrial Robot-based Magnetic Particle Inspection*, Kevin Schmitz, Daniel Groß, Florian Römer, Matthias Heinrich, Cemil Emre Ardic, Madalina Rabung, Samuele Martelli

ID838, *Robotic Automation of MPI/FPI Inspections: System Integration, Performance, and AI-Assisted Evaluation*, Miroslav Šnírer, Patrik Backo, Radek Salač

ACAD
Academia NDT International Research Session: Critical and Emerging Technologies at the forefront of NDE

Thursday, June 18th, 2026 – Room GS.A (morning)

ID129, *Detectability of Cracks from Notches Using Digital Radiography*, Shant Kenderian, Joseph T. Case, Paul M. Adams, Anita Gregorian

ID149, *Breaking Barriers in NDE: AI-Enhanced Solutions for Future Smart NDE*, Roman Gr. Maev

ID498, *DICONDE for Dent Digital Twins: Data Standardization for Aircraft Structural Inspections*, Geo Jacob, Aditi Mhatre, Salvatore Merola, Evgeny Grischenko, Ann-Kathrin Koschlik, Florian Raddatz, Gerko Wende

ID583, *Feature-Based Machine Learning Approach for Adhesive Joint Integrity Assessment*, Elena Jasiūnienė, Vykintas Samaitis

ID616, *The Evolution and Intelligence of Imaging in NDT: From Visual Inspection to AI-Driven Diagnostics*, Silvano Vergura

ID823, *Advancing a Research Agenda on the Ethical and Human Factors that will be Shaping the Evolution of AI/ML/DL Enhanced NDE Processes to Task-Oriented, Domain-Specialized Foundation Models in a Context of Exponentially Accelerated Maturing of Critical and Emerging Technologies (CETs)*, Ramon Fernandez Orozco, Serge Dos Santos

ID831, *Master-level teaching strategies supplemented by short courses: AI-based initiatives for Intelligent Inspection*, Serge Dos Santos, Joseph Moysan, Philippe Duvauchelle

ID925, *Recent Trends in Digital Industrial Radiography and CT*, Uwe Ewert

ITC
ITCOLD

Thursday, June 18th, 2026 – Room GS.A (afternoon)

Controllo satellitare infrastrutture e versanti, Società Fragile

Uso della fibra ottica per controllo comportamento infrastrutture, Società Smartec CH

Metodi di controllo non distruttivo su paratoie dighe, Ing. Michele Hirshler

Tecniche di controllo su condotte forzate e valutazione delle misure, Ing. Marco Lauro ENEL

Ripristino impermeabilizzazione diga Ceresole, Ing. Brizzo IREN Energia

Messa in sicurezza della diga di Beauregard, Ing. Nuris CVA

Gestione sedimenti, esperienze innovative, Ing. Frigerio RSE

WS
INAIL: Safety and Reliability of Work Equipment

Thursday, June 18th, 2026 – Room GS.C (morning)

ID296, *Structural Integrity of GFRP (Glass Fiber Reinforced Polymer) Non-Pressurized Reactor – Main Aspects and Case Study Analysis*, Domenico Di Fonzo, Giuseppe Augugliaro, Fausta Delli Quadri, Romualdo Marrazzo, Fabrizio Vazzana, Vincenzo Bartolozzi

ID302, *Non-Destructive Testing for the Safety of an Elevated Work Platform*, Luigi Monica, Sara Anastasi

ID303, *Non-Destructive Testing and Service Life Analysis on GRP or PRFV Equipment*, Alessandro Russo, Alberto Blanco, Roberto Nicosia, Armando Falla, Nicola Altamura, Roberto Acerboni, Francesco Boella, Angelo De Palma, Gianluca Saputi

ID306, *From Compliance to Prognostics: A Proposal for a New Regulatory Framework Based on NDE 4.0 and Historical Failure Data*, Francesco Santoro, Salvatore Spinoso, Paolo Infortuna

ID336, *Confirmation of Design and Construction Parameters Based on Operational Experience*, Riccardo Balistreri, Francesco Giacobbe

ID430, *Life Assessment of Martensitic Steels — Experimental Validation Activity of XRD by Testing Martensitics Steels Samples from Interrupted Uniaxial Creep Tests*, Andrea Tonti, Pietro De Blasi, Susanna Matera, Oriana Tassa

ID448, *Target 3D for Visual Testing with Drones*, Emanuele Artenio, Giuseppe Augugliaro, Riccardo Balistreri, Davide Gattamelata, Francesco Giacobbe, Omero Spanu

ID471, *Analysis of Corrosive Phenomena in Epichlorohydrin Storage Containers. Integrity Testing Procedures*, Carmine Piccolo, Giovanbattista Vaccaro, Gianluca Vena, Orazio Amati

ID542, *Advanced Diagnostic Inspection Techniques Supporting Engineering Assessments*, Stefano Sandon, Matteo Ballestra, Giovanni Federico Ramella, Valentina Zanni, Romano Ciancio

ID543, *From Compliance to Prognostics: A Proposal for a New Regulatory Framework Based on NDE 4.0 and Historical Failure Data*, Francesco Santoro, Salvatore Spinoso, Paolo Infortuna

ID590, *Use of Acoustic Cameras to Improve the Efficiency and Safety of Industrial Plants*, Danilo Sallustio

ID620, *Integrity Inspection of a Thermoelectric Power Plant and Elimination of Dissimilar Metal Welds*, Raffaele Iovene, Roberta Vasile, Marcello Di Giacomo, Marino Chendi

ID683, *Piping Systems with Innovative Materials: Damage Mechanisms, Design Criteria and Assessment Challenges*, Elisa Pichini Maini, Antonello Alvino, Alessandra Antonini, Daniela Lega

ID722, *Visual Testing of External Surfaces of Equipment Using a Drone*, Emanuele Artenio, Giuseppe Augugliaro, Riccardo Balistreri, Francesco Giacobbe

ID756, *Application of the Metallographic Replica Investigation Technique for the Evaluation of the Microstructural Condition of Industrial Components - Case Histories*, Carlo Dellabiancia, Mattia Dellabiancia, Romano Ciancio

ID774, *Non-Destructive Testing of Lifting Equipment: Assessing Residual Capacity and Ensuring Operational Safety*, Roberto Longo, Raffaele Fabiano, Raffaele Donato, Fabio Badolato, Anthony Cosentini, Maurizio Diano

ID793, *Ultrasonic Phased Array In lieu of Radiography for the Periodical in Service Inspection of an Austenitic Steel Pressure Vessel – A Case Study*, Antonino Andolina, Matteo Bartesaghi, Rosario Molica Nardo

ID846, *AI Creep Life-Prediction Assisted by Creep Damage Evaluation*, Arsalan Nazim, Andrea Tonti, Elisabetta Gariboldi

AM.3
Data Driven Approaches

Friday, June 19th, 2026– Room 11.A1 (morning)

ID 272, *Accelerated Machine Learning-Based High Volume Data Interpretation for Ultrasonic Inline Pipe Inspections*, Hongyu You, Mehrab Zamanian, Chris Peyton, Alistair Lawley, Vedran Tunukovic, Nick Bettley, Ehsan Mohseni, Gordon Dobie

ID 321, *Unsupervised Defect Detection in Industrial Images with Conformal Anomaly Detection and VAEs*, Flora Estermann, Philippe Guy, Philippe Delachartre, Valérie Kaftandjian

ID 410, *Study and Modelling of Non-Linear Effects for Acoustic Quality Monitoring of an Ultrasonic Welding Process*, Timo Reindl, Phi-Long Chung, Christian Bonten, Marc Kreutzbruck

ID 449, *Optimizing Tank Integrity Management: Advanced Data-Driven Approaches for Inspection Interval Optimization*, Andrew Simpson, Matthew Boat

ID 451, *Multiphysics Monitoring and NDT of Wire Arc Additive Manufacturing*, Douglas Serrati, André Ramalho, Nuno Mendes, Miguel A. Machado, Pedro Vieira, Rodolfo Oliveira, João P. Oliveira, Telmo G. Santos

ID 665, *Real-Time Adaptive Imaging Applied from the Weld Bead*, Nans Laroche, Sylvain Deutsch

ID 666, *Adaptive Imaging and Double Profilometry for Thickness Measurement of Complex Components*, Nans Laroche, Sylvain Deutsch

ID 706, *Self Learning Anomaly Detection on a Multidimensional Feature Space*, Oguzhan Sanliturk, Kevin Schmitz

ID 760, *Suppression of Geometrical Artifacts from Acoustic Lenses through Low-Rank Approximation*, Vinicius L. Costa, Thiago E. Kalid, Matheus F. Dário, Tatiana de A. Prado, Gustavo P. Pires, Daniel R. Pipa, Thiago A. R. Passarin

ID 950, *Dual-Sensor Electromagnetic Non-Destructive Testing for Material State Assessment of Different Quenched and Tempered Steels in the Context of Circular Production*, Mehdi Khabou, Volker Schulze, Stefan Dietrich

SS9
Non-destructive testing of batteries and energy storage systems

Friday, June 19th, 2026– Room 11.A2 (morning)

ID330, *Multi-stage Image Processing Approach for 3D-CT Based in- or at-line Inspection of Battery Cells*, Sven Gondrom-Linke, Tiago Ramos, Simon Schmid

ID506, *Resonant Eddy Current Sensing for Contactless Monitoring of Lithium-Polymer Cells*, Alessandro Sardellitti, Federico Carere, Ahmed Hishman Br, Silvia Sangiovanni, Marco Laracca

ID523, *An Innovative Non-Invasive Method for State of Charge Estimation in Lead-Acid Cells via Eddy Current Sensing*, Federico Carere, Alessandro Sardellitti, Ahmed Hisham Br, Silvia Sangiovanni, Marco Laracca

ID589, *From Reactor to Lab: Scaling Neutron Radiography for Industrial NDT Applications*, Serge Duarte Pinto, Arthur Bongrand, Olivier Bonnet, Julie Dalleau, Anthony David, Sean Gardell, Johann Kadionik, Olivier Merlin, David Pasquale, Juan Reyes, Steve Ritzau, Axel Rizzo, Florian Robert, Dmitriy Tipikin, Alexis Toussaint, Vincent van Steenbergen

ID619, *An Improved EIS for Battery State Estimation: a Non-invasive Measurement Approach*, Alessio Miele, Filippo Milano, Mario Molinara, Luigi Ferrigno

ID623, *Observation of Electrolyte Dynamics in Li-ion Batteries via In-situ Computed Tomography*, Jakub Šalplachta, Zuzana Stravová, Gergő Ballai, Dániel Sebok, Ákos Kukovecz

ID777, *Time-to-Insight as a Metric for Battery CT Inspection Full*, Christopher Zepp

ID884, *Linear and Nonlinear Ultrasonic Features for the Estimation of the State-of-Charge in Lithium-ion Battery Cells*, Gregorio Cappuccino, Domenico Luca Carnì, Stefano Laureti, Vincenzo Maccaronio, Rocco Zito, Marco Ricci

M.3
Guided waves

Friday, June 19th, 2026– Room 11.B1 (morning)

ID155, *Comprehensive Inspection of Large-Diameter Pipes Combining Guided Wave Screening and Scanning*, Keith Vine, Brian Pavlakovic, Thomas Vogt

ID168, *Feasibility Study on Onload Guided Wave Testing for Evaluating Boiler Spine Integrity and Insulation Performance*, John Jian

ID188, *Advancements in Guided Wave Inspection: LRUT Focusing and MRUT Sizing Techniques*, Levente Bazsanyi

ID281, *Damage Detection in Thin-walled Structures Using Guided Waves and an Optical Microphone*, Caspar Wasle, Björn Wohltmann, Rebecca Rodeck, Gerko Wende

ID289, *Quantitative Characterisation of Defects in Pipes Using Guided Wave Testing with Geometrical Full Waveform Inversion*, Elias Rabbat, Peter Huthwaite

ID333, *Evaluation of Material Properties of Plates with PAUT Using Particle Swarm Optimization Inversion Procedure*, Guillemette Ribay, Bengisu Yilmaz, Axel Thomas, Quentin Baudis, Arnaud Recoquillay

ID431, *Corrosion Mapping in Buried Section of Monopoles Using Magnetostrictive Transducer Arrays*, Sergey Vinograodov, Jay Fisher, Patrick Grädel, Pierre Dupuis, Dominik Hirschhausen

ID502, *Temperature Compensation for Guided Wave Signals Using Denoising Autoencoders*, Matthew Newson, Clément Fisher

ID854, *Guided-wave-based Information Transfer through Parametric Encoding of Ultrasonic Signals*, Beata Zima

ID943, *An Innovative Thermocouple-Waveguide Sensor System for Measuring the Temperature of a Hot Melter*, Suresh Periyannan, Krishnan Balasubramaniam

SS23
New Trends in Non-Destructive Testing of Automotive Structures

Friday, June 19th, 2026– Room 11.B2 (morning)

ID112, *Work Safety and Ecological Improvements for Magnetic Particle and Penetrant Testing*, Kersten Alward

ID386, *Advancing Quality Assessment of Adhesive Bonds through Automated Laser-Excited Ultrasonic Inspection*, Tobias Ziegelwanger, Ryan Sommerhuber, Josef Pörnbacher, Balthasar Fischer

ID457, *AI in Ultrasonics Spot Weld Inspections*, Christian Wagner, Jan Koutník

ID628, *Non-Destructive Testing of Resistance Spot Welds by Magnetic Evaluation*, Christian Mathiszik, Johannes Koal, Hans Christian Schmale, Uwe Füssel

ID688, *Ultrasonic Testing of Projection-Welded Foils for Bipolar Plates*, Franz Hielscher, Martin Weber, Johannes Koal, Hans Christian Schmale, Jere Hyvönen, Ari Salmi

ID759, *Torque Evaluation of Automotive Connecting-Rod Bolts Using Piezoelectric Sensors and Contact Acoustic Nonlinearity Methods*, Matteo Febo, Giovanni Erdino, Francesco Ciampa, Davide Palumbo, Umberto Galietti, Maria Cinefra, Simone De Carolis, Leonardo Soria, Maria Michela Dell'Anna, Maria Stella Leone, Francesca Derobertis, Piero Mastrorilli, Mattia Mele, Sebastiano Parisi, Gianmarco Milan, Damiano Rossi, Eugeniu Grabovic, Maurizia Seggiani, Irene Anguillesi, Enrico Ciulli, Massimiliano De Agostinis, Gianluca Di Egidio, Luca Lorenzetti, Carla Martini, Ester D'Accardi

ID787, *Weld Quality Assessment in Ultrasonically Welded Thermoplastic Composites using Infrared Thermographya*, Anshul Sharma, Baris Caglar, Clemens Dransfeld

ID875, *State-of-the-art Ultrasonic Spot Weld Inspection – Manual, Robot-based, and Automated with AI*, York Oberdoerfer, Roman Maev

AM.5
NDE 4.0

Friday, June 19th, 2026– Room 11.C2 (morning)

ID113, *AI-Based Signal Analysis and Flaw Detection for Eddy Current Testing of Heat Exchanger Tubes*, Ryohei Fujita, Misaki Sanokawa, Shota Yamabe

ID177, *Machine Learning-Based Classification of Reclaimed Structural Steel Using Non-Destructive Testing*, Shagea Alqawzai, Thi Qui Nguyen, Mingshan Zhao, Linyun Zhang

ID189, *Depth and Height Measurement of Subsurface Defects in Non-Ferromagnetic Metallic Materials with Eddy Current Testing Utilizing Machine Learning*, Maria Poulaki, Vyron Drosos, Nikolaos Poulakis, Apostolos Kotouzas

ID328, *Automated Borescope Inspection with AI Support for Visual Testing*, Marco Induti, Massimiliano Tinari, Manuel Yersin, Erik Stara, Luca Scaccabarozzi

ID447, *Non-Destructive Electromagnetic Sensor Array for Spatially Resolved Phase Transformation Monitoring in Steel Narrow Strip and Rod Processing*, Fanfu Wu, Lei Zhou, Shaun Hobson, Matthew Green, Claire Davis

ID541, *Democratising Advanced UT: A Workflow Centric Approach for NDT 4.0*, Paul Hillman, Dominic Giguere, Jerome Poirier

ID548, *Software Assisted Analysis for AUT Data of Pipeline Girth Welds*, Paul Hilmann, Daniel Richard, Johan Berlanger, Dominic Marois

ID695, *GPU-Accelerated Phased-Array Ultrasound Scanner for Integration of AI/ML Methods*, Marcin Lewandowski, Mateusz Walczak, Piotr Jarosik, Piotr Karwat

M.8
Infrared Thermograpy

Friday, June 19th, 2026– Room 11.D1 (morning)

ID462, *Thermographic Monitoring of a 70+ m Full-scale Wind Turbine Blade Fatigue Test*, Michael Stamm, Somsubhro Chaudhuri, Patrick Grzywok, Julien Lecompagnon

ID513, *Non-Destructive Thickness Estimation of Extreme High-Speed Laser Cladding Coatings on Brake Discs Using Eddy Current and Photothermal Techniques*, Michele Carboni, Omar Madkouri, Barbara Previtali, Geoffrey Bruno, Paolo Calefati

ID712, *Effect of Sandwich Honeycomb Core features on Thermography Inspection with Pulsed Optical Excitation*, Fethi Dahmene, Samuel Maillard, Jean-Nicolas Frouart, André Baillard

ID732, *Active Thermography with Inductive Excitation for Grinding Burns Detection - Application to Aircraft Landing Gear Components*, Sylvain Plouvier, Samuel Maillard, Jean Nicolas Frouart, Fethi Dahmene, Benoit Géradin, Olivier Ghibaudo, Thibaut Schmoor, Timothée Vinet

ID741, *Shaping the Future of Thermography: Standardization as a Bridge between Innovation and Application*, Mathias Ziegler, Jochen Aderhold, Stéphane Amiel, Patrick Bouteille, Giuseppe Dell'Avvocato, Umberto Galietti, Eider Gorostegui Colinas, Richard Huillery, Ingmar Jakobi, Andreas Keller, Samuel Maillard, Günther Mayr, Malte Mund, Daniel Müller, Beate Oswald-Tranta, Vaclav Straka, Michal Svantner

ID789, *Integrated Non-Destructive Evaluation of Bacteria-Based Self-Healing Concrete*, Krit Sukprasit, Keisuke Nitta, Katsufumi Hashimoto, Takafumi Sugiyama

ID794, *Finite Element Simulations and their Validation for Inductive Thermography*, Beate Oswald-Tranta, Jean-Marie Ehrenberger

A.4
Transportation

Friday, June 19th, 2026– Room 11.D2 (morning)

ID118, *On-Site Quantitative Characterization and Performance Verification of a New Phased-Array Instrument for the Automated PAUT Inspection of Steel Bars in Accordance with EN ISO 18563-1*, Sanjeevareddy Kolkoori, Cord Asche, Claudia Jasperneite, Daniel Koers, Josef Maier

ID121, *Detection of Fatigue Cracks in Multilayer Riveted Aircraft Structures by Double Differential Eddy Current Probes*, Valentyn Uchanin, Giuseppe Nardoni, Mario Turconi, Marco Feroldi

ID299, *Effective and Modern Methods of Testing Large Forgings or Castings with Customer-Designed MT Systems*, Ondrej Doubek

ID339, *Seven Years of Innovation in Binary Ultrasonic Imaging for NDT*, Pierre Bélanger, Guillaume Painchaud-April, Alain Le Duff, Baptiste Gauthier, Tony Rasolonirina, Aurélien Thon, Rafaël Niddam

ID432, *Integrated System for Advanced Monitoring of Steel Ropes based on 3D Visual and Dimensional Analysis to Support the Magneto-inductive Method (MRT)*, Alessandro Rossi, Matteo Liuzzi, Davide Moschitti, Cristiano Bonetti, Davide Zanetti

ID483, *Enablers to boost the benefits of Artificial Intelligence for NDT***,** Cédric Bertrand, Silvère Barut

ID737, *Assessing the Potential of Advanced Imaging with Low Frequency Rayleigh Waves: from Single Beam A-scan to TFM and Phase Coherence Imaging*, Florin Turcu, Raphaël Côté-Vachon

ID747, *Recent Advances in Orbital Weld Inspection using Eddy Current Array Testing*, Mathieu Bouchard, Louis-Daniel Théroux, Sergio Loffredo, Alain Haddad, Sergio Grond

ID802, *Integrated Non-Destructive Testing Concept for Type 4 Hydrogen Storage Tanks*, Soonho Won, Hak-Sung Lee, Martin Schulze, Till Schulze, Henning Heuer

M.2
Microwave, mm Wave, THz

Friday, June 19th, 2026– Room 12.A (morning)

ID255, *Handheld Terahertz Optoelectronic FMCW Radar for Nondestructive Thickness Measurements of Paint Coatings on Glass Fiber-Reinforced Composites*, Shiva Mohammadzadeh, Raphael Hussung, Dominik Gundacker, Maris Bauer

ID261, *Real-Time Non-Contact Monitoring of Micromachining Tools Using mmWave FMCW Radar*, Kamal Khalil, Ahmed Abotoor, Mohamed H. Hassan, Zekai Murat Kilic, Michael D. O'Toole, Anthony J. Peyton

ID301, *Development of an Optimized Non-Contact SFCW-SAR Scanning System for Concrete Structures*, Joo-Hyung Lee, Changbin Joh, Ji-Young Choi

ID305, *Microwave Inspection of HDPE Pipes and Joints*, Alessandro Demma, Victor Manuel Valle, Guillermo Garcia Aguilar

ID351, *Terahertz Inline Measurement System for Continuous Tracking of Inner Pipe Positions During the Production of Insulated Pipe Systems*, Raphael Hussung, Rodrigo Gantenbein, Fabian Friederich, Jürgen Kress, Maris Bauer

ID417, *Electrical Reflectometry for Early Fault Detection in Power Cables*, Tim Whitmore, Constantinos Onoufriou, Lujia Chen, Anthony Peyton, Guangqiao Xu

ID438, *High-Resolution FMCW Radar for Non-Destructive Testing of RAAC Structures*, Kamal Khalil, Samuel J. I. Forster, Frank J. W. Podd, Michael D. O'Toole, Anthony Peyton

ID518, *Millimeter Wave Radar Technology for NDT Applications*, Sven Leuchs, Christian Krebs

ID791, *Compact UWB Antenna-Based SFCW Radar with Fast Delay-and-Sum Algorithm for Concrete Scanning*, Joo-Hyung Lee, Gyeongyong Jeong, Keunhee Cho, Ji-Young Choi, Moon-Que Lee, Changbin Joh

ID842, *Calibration-Free Measurement of the Thickness of Non-Metallic Coatings on Metals by a Millimeter-Wave Sensor*, Valeri Mikhnev, Wojciech Knap