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Nota di contenuto	Title page; Foreword; Preface; Conference Organization; List of Participants; Contents; Advanced Modeling and Simulation for Electromagnetic NDE; Field Computations of Inductive Sensors with Various Shapes for Semi-Analytical ECT Simulation; Fast Simulation Method of Multiple Narrow Cracks in Planar Stratified Media; Numerical Simulation of Electromagnetic Acoustic Transducers in Time Domain; Parallel MGS-QR Sparsification for Fast Eddy Current NDT Simulation; Nondestructive Interrogation of Dielectric Materials Using Markov Chain Monte Carlo Method for Structural Equation Model Magnetic Barkhausen NDE Real-Time Non-Destructive Inspection of Stress-Induced Anisotropy Using Magnetic Barkhausen Noise; Gear Quality Assessment Using Magnetic Barkhausen Noise Technique; Automatic Monitoring of Flexible Risers Using Magnetic Barkhausen Noise and Clustering Methods; Use of Magnetic Barkhausen Noise to Evaluate the Mechanical Properties and Residual Stress; Metallic Materials Characterization; Advances in Electromagnetic NDE Techniques for Characterization of Metallic Materials; Evaluation of

Subsurface Shape of Fatigue Crack by Eddy Current Testing
Electromagnetic Evaluation of Metallic Fillers - Plastic Composites
Quantitative Estimation of Strain Induced α' - Martensite in Cold
Worked AISI Type 304 Stainless Steel Using GMR Sensor;
Characterization of Pulsed Eddy Current NDE in Metallic Materials
Through in-situ Monitoring of Tensile Testing; Magnetic NDE
Techniques; Evaluation of Sigma Phase Embrittlement in Fe-Cr Alloys
by Magnetic Hysteresis Loop Technique; Behavior of Magneto acoustic
Emission on Cold-Rolled Fe-Cu Alloy with Thermal Aging; Early
Detection of Damage in Thermo-Cyclically Loaded Austenitic Materials
Understanding Sigma Phase Influence on the Magnetic Behavior of
Duplex Stainless Steel Inversion and Imaging Techniques; Improvement
of Restoration Accuracy of Semi-Elliptical Surface Crack Considering
the Resolution of Flux Gate Sensor; Statistical Analysis of Array Probe
Eddy Current Data from Steam Generator Tubes; Dipole Identification
and Localization Using Pseudo-Inverse Techniques for Magnetic Flux
Leakage Experiments; 3-D finite Element Modeling of Leakage Magnetic
Fields from Inclined Cracks in Carbon Steel Plates
Competitive Learning on Cosine Similarity Method for Classification of
Defects in Two-Layered Metallic Structures 3D Image Reconstruction
Using Noisy EMAT Signal; Eddy Current Imaging Enhancement Using
Electromagnetic Evanescent Waves; Sensors and Transducers for
Electromagnetic NDE; Damage Evaluation of Copper Alloy by Eddy
Current Testing with AMR Sensor; Eddy Current Transducers Dedicated
for Titanium Billets Evaluation; Comparison of Detection Abilities
Between Inductance Sensor and Fluxgate Magnetometer in ECT
Pipe Wall Thickness Measurements on Flow Accelerated Corrosion by
Electro-Magnetic Acoustic Transducer

Sommario/riassunto

Nondestructive evaluation is a vitally important tool in many fields of engineering, medicine and art. Because it does not permanently alter the article being inspected, it is a highly-valuable technique that can save both money and time in product evaluation, troubleshooting and research. Electromagnetic Nondestructive Evaluation (ENDE) is the process of inducing electric currents, magnetic fields or both inside a test object and observing the electromagnetic response. This book is a collection of 41 papers presented at the 16th International Workshop on Electromagnetic Nondestructive Evaluation
