



SPECIAL SESSION

Advances in inspection and non-destructive testing for assessment and maintenance of bridge structures

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OBJECTIVE AND TOPICS: The Special Session will present recent advances in non-destructive testing (NDT) for bridge structures, showcasing experimental results from laboratory and in-situ tests. The session emphasizes practical applications, data interpretation, and contributions to guidelines and standardization for inspection, assessment, and maintenance of bridges.

Topics include (but are not limited to):

- Advanced NDT techniques for damage detection and material characterization
- Vibration-based and dynamic testing for structural assessment
- Acoustic, ultrasonic, GPR, thermographic, and optical methods applied to bridges
- Laboratory validation and calibration of NDT techniques
- In-situ testing campaigns on existing bridges and viaducts
- Integration of NDT data with monitoring systems and Digital Twins
- Data interpretation, reliability and uncertainty quantification
- Contribution to guidelines and standardization

Some activities are conducted by multiple research groups within the Italian ReLUIS–CSLLPP initiative (www.reluis.it) aimed at contributing to the updating of guidelines for existing bridges.

All the instructions for paper submission are included in the conference website: <https://www.ecndt2026.org>