



SPECIAL SESSION

## HUMAN-CENTRED NDE 4.0

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**OBJECTIVE AND TOPICS:** The Special session will be focused on the human factors challenges and opportunities in NDE 4.0, addressing how assistive technologies — including AI, AR/VR/MR, robotics, and digital tools — interact with human operators. Key topics include trust, acceptance, skill retention, task distribution, human–AI and human–machine teaming, user-centred interface design, usability, and human performance in hybrid human–AI teams. Contributions may present case studies, experimental research, or best practices for integrating human considerations into automated and digital NDE workflows. The session aims to foster discussion on designing NDE 4.0 systems that are technologically advanced yet truly human-centred, supporting safe, efficient, and reliable inspection practices accepted by its intended users.

Areas of interest include, but are not limited to:

- Human-machine, human-automation and human–AI interaction in NDE
- Trust, acceptance, and user adoption of assistive technologies
- Skill retention, training, and qualification in digital NDE workflows
- Task distribution and human–technology collaboration
- User-centred interface and system design
- Design of explainable AI (XAI) from a user perspective
- Human performance in hybrid teams
- Case studies of humans interacting with AI, AR/VR/MR, robotics, or other digital tools during inspection
- Human factors assessment and evaluation methods in NDE 4.0

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

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