

Special Issue on
**Non-destructive Testing for Performance Evaluation of
Civil Materials and Structures**

CALL FOR PAPERS

Non-destructive Testing (NDT) is a wide collection of non-invasive inspection techniques aimed at evaluating the properties of a material, component, or structure system used in engineering. NDT techniques have emerged as critical assessment tools in the civil and construction industry for quality control of new constructions, in situ material characterisation, assessment of existing structure conditions, and quality assurance of repair work. As a result, material properties and structural damage can be inspected in a timely manner and warning messages can be sent prior to structure failure.

Recently, NDT-based techniques have been highlighted as tools to evaluate materials and structures in civil engineering. NDT methods have been adopted in characterising a variety of civil materials, from traditional cement, concrete, and structural steel, to newly developed materials such as polymers, short-fibre composites, and self-healing materials. Moreover, evaluation of civil structures conditions using NDT techniques is a worldwide priority to meet the challenges associated with the durability of the structures and to assist decision making for maintenance, rehabilitation, and retrofit of existing civil structures.

The aim of this Special Issue is to provide a platform for researchers to share the latest achievements and applications in characterisation, assessment, and health monitoring of civil materials and structures using NDT techniques. We solicit original research articles and review articles discussing the state of the art in this field.

Potential topics include but are not limited to the following:

- ▶ Non-destructive methods for fracture characterization of civil materials
- ▶ Non-destructive methods for physical and structural properties of civil materials
- ▶ Multi-scale damage mechanisms of cement and bituminous materials
- ▶ Non-destructive tests for reinforced concrete, steel, and historic masonry structures
- ▶ Non-destructive monitoring of asphalt pavements
- ▶ Non-destructive evaluation of polymer-rehabilitated cement-based structures
- ▶ Integration of non-destructive testing methods to obtain a better effect
- ▶ Data processing and machine learning in non-destructive testing
- ▶ Numerical simulation of non-destructive testing in civil materials and structures
- ▶ Practical application of NDT techniques in health monitoring of civil structures

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=782737>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Yubo Jiao, Beijing University of Technology, Beijing, China
jiaoyb@bjut.edu.cn

Guest Editors

Xiangxiong Kong, Coastal Carolina University, Conway, USA
kuxkong@gmail.com

Qinglin Guo, Hebei University of Engineering, Handan, China
guoql@hebeu.edu.cn

Submission Deadline

Friday, 19 March 2021

Publication Date

August 2021