Special Issue

Structural Assessment of Reinforced Concrete Elements Damaged by Corrosion: Experimental, Numerical and Analytical Studies

Message from the Guest Editors

Reinforced concrete (RC) structures/infrastructures are often exposed to different types of damages and deterioration due to exposure conditions during their service life. Practical cases of premature deterioration in RC structures highlight that corrosion is one of the dominant degradation mechanisms in 70% of the evaluated cases. The principal effects of corrosion, such as cracking and spalling of the concrete cover, are associated with reductions of the reinforcement cross-section. The latter, accompanied by a mechanical properties decay, is still investigated in terms of the hysteretic energy degradation during cyclic or fatigue loading as well as buckling behavior. Consequently, steel reinforcement corrosion plays a key role on the entire structural performance of reinforced concrete structures. It is our pleasure to invite you to submit a manuscript for this Special Issue, gathering original research contributions and critical reviews that go beyond the current knowledge in the structural assessment of corroded reinforced concrete members by means of experimental, numerical, and analytical investigations.

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Deadline for manuscript submissions

closed (31 December 2022)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/72748

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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