Special Issue

Concrete 3D Printing and Digitally-Aided Fabrication

Message from the Guest Editor

The concrete construction industry has improved its productivity for last 50 years. Nowadays, the development of computer-aided design tools along with the introduction of additive manufacturing in the construction industry have the ability to revolutionize the way we build construction.

This Special Issue focuses on new additive manufacturing methods used for concrete: the extrusion-based method, particles-based methods, and others new techniques using shotcrete or digitally fabricated permeable formworks or fabrics. Paper topics can deal with many aspects related to the digital fabrication of concrete and cement-based materials: processing, case study, fresh state properties and rheological requirements, the mechanical behaviour of printed cement-based material, the structural design of printed parts and structures, and environmental and economic impacts.

This Special Issue is expected to provide a collection of articles showing an overview of recent advances in the field of concrete 3D printing and drawing future perspectives for these new revolutionizing methods.

Guest Editor
Dr. Arnaud Perrot
IRDL, Université Bretagne Sud, Lorient, France

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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