Special Issue

Recent Advances in Non-Local Modelling of Nano-Structures

Message from the Guest Editor

Mechanical modeling of nano-materials and nanostructures is a subject of ever-increasing interest in the scientific literature due to the challenging tasks in theoretical formulations and computational methodologies. Carbon nanotubes and graphene sheets are widely investigated for the development of modern nano-devices. The realization of groundbreaking nano-sensors and nano-actuators, as basic structural elements of scanners, mirrors, gyroscopes, springs and many similar other nanoscale systems, is an important target, with countless conceivable applications. Nano-materials are effectively used also as excellent components for reinforcement in composites nano-structures. Small-scale structural modeling of 1D, 2D and 3D continua is conveniently resorted to in place of atomistic approaches. Several nonlocal models have been proposed in literature and extensively investigated. This approach is still the focus of an active scientific debate concerning consistency of theoretical formulations, fitting of experimental data and predictive capabilities of phenomena in the small-scale range. Both theoretical and experimental contributions are welcome.

Guest Editor

Prof. Dr. Raffaele Barretta

Department of Structures for Engineering and Architecture, University of Naples Federico II, 80125 Naples, Italy

Deadline for manuscript submissions

closed (30 April 2019)



Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/15319

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

mdpi.com/journal/applsci





Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

