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Recent Advances in Non-Local Modelling of Nano-Structures

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:
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Message from the Guest Editor

Dear Colleagues,

Mechanical modeling of nano-materials and nano-structures 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 ground-breaking 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.

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Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

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Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
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