Modelling and Analysis of Small-Scale Structures (MASS)

Organizers:

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Appropriate modelling and assessment of scale sensitive phenomena in innovative materials and structures are themes of wide and active interest for the community of conventional and non-conventional Engineering Science. Small-scale systems have recently spread in industry with countless conceivable applications, such as ground-breaking devices for Nanotechnology and Mechanobiology. It is well-known that the mechanical behaviour at nano-scale significantly deviates from the macroscopic counterpart due to size-effects. In a suitable range of characteristic wave-lengths, a continuum approach can be successfully exploited to simulate small system behaviour. A decisive challenge tackles with open problems of mathematical and physical concern.

This minisymposium intends to collect high quality and original contributions regarding theoretical, computational and experimental research activities devoted to provide a better knowledge and effective implementation of solution procedures.

Potential topics include but are not limited to the following ones.

- Advanced and Bioinspired materials.
- Wires, membranes, beams, plates, shells and lattice structures.
- Nonlocal continuum mechanics.
- Nanoscience and nanotechnology.
- MEMS and NEMS.