

# New Trends in Mechanics

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With respect of the advantages and disadvantages of the classical models the new trends are formulated. There are several open questions:

- It is necessary to introduce new governing equations of mechanics if we have nanosize structures?
- What we have to do if surface effects are dominant?
- How we can distinguish classical and non-classical continua?
- What we have to do in the case of one- or two-dimensional structural elements like beams, rods, plates or shells?

There are a lot of answers to these questions. There will be summarized and analyzed. Finally, some recommendations concerning applications will be given.