

Reliable numerical methods in structural mechanics and flow problems

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Abstract:

This minisymposium is focused on numerical analysis and advanced approximation methods for nonlinear problems in solid and fluid mechanics. It includes mathematical analysis of solution properties, a priori and a posteriori error estimates, error indication and adaptive numerical methods. A particular interest is devoted to problems which solutions contain interfaces or failure zones, problems with contact or free boundaries and with other sharp geometrical peculiarities. Also problems with strongly heterogeneous media (including micro models analysed by homogenisation type methods), with different phases of media or with cracks or fractures may be considered.