

STABILITY IN MATHEMATICAL MODELS FOR ENGINEERING

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ABSTRACT

This minisymposium aims to consider different kinds of stability analyses of mathematical models used in engineering. We aim to gather together experts on stability, working on a variety of problems from a wide variety of perspectives, in order to highlight and discuss different approaches and solutions.

There are several possibilities to find critical regimes from the equations and simulations. The analysis can be numerical or analytical. It can concentrate on the behaviour of a specific mathematical model or, for example, on the differences in behaviour within a class of related models. Visualisation capacities can be used efficiently for a deeper understanding of the phenomena. We are also interested in cases where stability has been used as an optimization criterion.

We are especially interested in complex physical situations, such as fluid–structure interaction problems, or axially moving materials. However, the field of technology can be freely chosen.