Title:

STRUCTURAL STABILITY

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Abstract:

Diagnosis of loss of stability of structures and of their postbuckling behavior is a challenging topic of both fundamental and applied research as well as of engineering practice. The complexity of many stability problems in engineering requires the use of modern mathematical theories of stability. The advent of the digital computer, followed by the development of computational mechanics, has greatly enhanced the applicability of such stability theories. This, in turn, has motivated researchers to tackle problems which previously were considered to be intractable. One of them is design sensitivity analysis of the initial postbuckling behaviour of elastic structures. Related to this problem is the convertibility of such structures from imperfection sensitivity into insensitivity. These are just two examples of a very wide field including loss of stability in the plastic material domain, dynamic instability, loss of stability of different types of structural members such as beams, panels, shells, etc. Two sessions with one keynote lecture and five papers each will permit a structure of the Minisymposium containing the most important streams of contemporary research in structural stability.