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Nonconservative Stability Problems of Structural Mechanics and Fluid-Structure Interactions

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Research on nonconservative problems of structural mechanics and fluid-structure interactions has been spread through the years along various directions and across a broad range of physical scales, including such exotically sounding areas as cells mobility, circumnutations of plant shoots and graphene peeling. In this mini-symposium we welcome researchers from all areas of solid and structural mechanics for discussing nonconservative problems in classical and cutting edge applications. Theoretical, computational and experimental studies are invited of such engineering situations as instabilities of wings, flags and pipes; electromechanically coupled systems; conventional and soft robotics; wave energy converters; friction-induced vibrations; stability of slender structures under conservative and non-conservative stationary and time-dependent loads; rotor dynamics; stability of moving continua and wave propagation in infinite dimensional structures; radiation-induced instabilities; biomechanics. The goal of this mini-symposium is to bring together theorists, experimentalists and practitioners who are interested in exchanging new challenging nonconservative stability problems in structural and solid mechanics and fluid-structure interactions and novel methods of stability analysis and nonlinear dynamics.