



## Lecture No. 102

**Czech Society for Mechanics  
and Institute of Thermomechanics, CAS**

invite you to a lecture and discussion within  
the lecture series **Institute of Thermomechanics Seminar**

### Surface accretion of a pre-stretched half-plane: Biot's problem revisited

given by

**Prof. Giuseppe Tomassetti**  
Roma Tre University

Motivated by experiments on dendritic actin networks exhibiting surface growth, we address the problem of its stability. We choose as a simple, reference geometry a biaxially stretched half plane growing at its boundary. Actin is modelled as a neo-Hookean material. A linear kinetic relation is assumed between growth velocity and a stress-dependent driving force for growth. The stability problem is formulated and results discussed for different loading and boundary conditions. Connections are drawn with Biot's 1963 surface instability threshold.

**The lecture will be held on Thursday, September 9, 2021 at 13:00  
in the building of the Institute of Thermomechanics (new large lecture room),  
Dolejškova 5, 182 00 Prague 8**