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**Stochastic homogenization of a model of plant biomechanics**

**Abstract**

In this talk we consider a microscopic model for biomechanics of a plant tissue with randomly distributed cells. Applying techniques of stochastic homogenization we derive macroscopic equations that allow us to analyse the impact of random microscopic structure on the macroscopic behaviour and macroscopic mechanical properties of plant tissues. The main challenge in the stochastic homogenization of models for plant biomechanics comes from the perforated structure of plant tissues and boundary conditions on surfaces of the microstructure.