Convergence of equilibria of thin inextensible rods in the von Kármán scaling regime Mario Bukal University of Zagreb

In this talk I will present a method for simultaneous homogenization and dimension reduction in the context of convergence of stationary points for thin inextensible nonhomogeneous rods under the assumption of the von Kármán scaling regime. Assuming stationarity condition for a sequence of deformations close to a rigid body motion, we prove that the corresponding sequences of scaled displacements and twist functions converge to a limit point, which is the stationary point of the homogenized von Karman rod model.

This is a joint work with Igor Velčić (U Zagreb) and Matthäus Pawelczyk (TU Dresden).