SEBASTIAN DOMINGUEZ, University of Saskatchewan
Steklov eigenvalues in linear elasticity

In this talk we discuss Steklov eigenvalues for the Lamé operator in linear elasticity. In this eigenproblem the spectral parameter appears in a Robin-type boundary condition, linking the traction and the displacement. To establish the existence of a countable spectrum for this problem, we present an extension of Korn's inequality. We also show that a proposed conforming Galerkin scheme provides convergent approximations to the true eigenvalues. Finally, a standard finite element method is used to conduct numerical experiments on 2D and 3D domains.