

Mixed finite element formulations for pde problems on graphs

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In this talk we will review standard mixed finite element formulations for the eigenvalue as well as the evolution problem. In particular we will illustrate techniques for establishing convergence rates for discretizations. We will then present a mixed formulation for a finite element model of an endovascular stent. We will establish convergence rates for discretized problems and present numerical experiments on geometries of several commercial stents.

This is joint work with J. Tambača and J. Iveković.