The Fully Nonconforming Virtual Element Method for Biharmonic problems

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ABSTRACT

In this talk we address the numerical approximation of linear fourth-order elliptic problems on polygonal meshes. In particular, we present a novel nonconforming virtual element discretization of arbitrary order of accuracy for biharmonic problems. The approximation space is made of possibly discontinuous functions, thus giving rise to the *fully nonconforming* virtual element method. We derive optimal error estimates in a suitable (broken) energy norm and present numerical results to assess the validity of the theoretical estimates.