

Title: GenEO for frequency-domain wave problems

Abstract: The use of GenEO coarse spaces within domain decomposition has proved very effective in order to provide robust solvers for heterogeneous positive definite elliptic problems. On the other hand, developing effective solvers for high frequency wave propagation problems, such as those described by the Helmholtz or Maxwell equations, remains particularly challenging. In this talk we give an overview of recent progress in applying GenEO technology to such problems, outlining the benefits, drawbacks and challenges that remain.