A tailored finite point method for high frequency waves in heterogeneous media

Zhongyi Huang

Tsinghua University
Beijing, P.R. China
email: zhuang@math.tsinghua.edu.cn

Abstract:

In this talk, we propose a tailored finite point method for the numerical solution of the Helmholtz equation with high wave numbers in heterogeneous media. Our finite point method demonstrates a uniform rate of convergence with respect to the wave number k in the L_2 norm.