Corner Scattering and Inverse Scattering

Jingni Xiao

Department of Mathematics, Rutgers University, USA

Email: jingni.xiao@rutgers.edu

We would like to present our latest findings on the followings [1,2]. We consider time-harmonic acoustic or electromagnetic scattering by penetrable inhomogeneous media. We examine the effect of nontrivial scattering due to the appearance of corners at the support of the inhomogeneities. Applications in the inverse scattering on shape determination from one single measurement will also be discussed.

Joint with Blåsten Emilia, Fioralba Cakoni and Hongyu Liu

References:
[1] F. Cakoni and J. Xiao. On corner scattering for operators of divergence form and applications to inverse scattering. Submitted. arXiv preprint, arXiv:1905.02558, 2019.
[2] E. Blåsten, H. Liu, and J. Xiao. On an electromagnetic problem in a corner and its applications. Submitted. arXiv preprint, arXiv:1901.00581, 2019