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Hongyu Liu* (hongyu.liuip@gmail.com), Department of Mathematics and Statistics,
University of North Carolina, Charlotte, University City Blvd, Charlotte, NC 28223. *Locating
Multiscale Scatterers by A Single Electromagnetic Far-field Measurement.*

In this talk, I shall describe several inverse scattering schemes of locating multiple multiscale scatterers by a single electromagnetic far-field measurement. The proposed methods can work in an extremely general setting. The number of scatterer components is not required to be known. The physical properties of each scatterer component is not required to be known either. There might be both small-size components and regular-size components (compared to the detecting EM wavelength) presented at the same time. For the regular-size components, we need know the possible shapes in advance. The locating of both space and ground objects will be discussed. (Received July 18, 2013)