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Isaac Harris* (iharris@tamu.edu) and **William Rundell**. *Direct Method for Reconstructing Inclusions from Electrostatic Data.*

In this talk, we will discuss the use of the Linear Sampling Method to reconstruct impenetrable inclusions from Electrostatic Cauchy data. We consider the case of a perfectly conducting and impedance inclusion. In either case we see that the Dirichlet to Neumann mapping can be used to reconstruct impenetrable sub-regions. We also propose a non-iterative method to reconstruct the impedance parameter from the knowledge of multiple Cauchy pairs which can be computed from Dirichlet to Neumann mapping. Some numerical reconstructions will be presented in two dimensions. (Received September 21, 2017)