

Department of Mathematics, Statistics and Computer Science

## COLLOQUIUM

### *Improving Image Quality for Practical Electrical Impedance Tomography Imaging with Direct D-bar Methods*

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Cudahy Hall, Room 401

#### **Abstract**

Thoracic Electrical Impedance Tomography (EIT) imaging recovers the internal conductivity and permittivity distributions of a patient's thorax from electrical measurements taken on electrodes attached to the patient's chest. The reconstruction task is a severely ill-posed nonlinear inverse problem that is highly sensitive to measurement noise and modeling errors. Over the past decade, D-bar methods have shown great promise in producing noise-robust implementable real-