

*Department of Mathematics,
University of California, San Diego*

Math 278 - CCOM Seminar

Joey Reed

UCSD

Electrical Impedance Tomography

Abstract:

Electrical Impedance Tomography (EIT) is a medical imaging technique which attempts to find conductivity inside the human body. Mathematically speaking, EIT is an inverse problem. In inverse problems, experimental data is used to approximate some property (or control) of the system of interest. For EIT, this experimental data is electric potential on the body's surface. One big concern with EIT is that it is a highly ill-posed problem. In our context, this means that the conductivity is highly dependent on experimental noise. In this talk I will describe the mathematical model used for the forward problem of EIT. The inverse problem will then be described as a constrained least squares problem.

Tuesday, November 17, 2009

11:00 AM

AP&M 2402
