Implementation of Electrical Impedance Tomography

The project aims to develop and expand an existing algorithmic reconstruction of electrical impedance tomography (EIT). This is an imaging method, which seeks to reconstruct the electric conductivity of a conducting body by suitable measurements at the boundary. There are four separate directions.

The first project will involve the numerical implementation of partial differential equations. A second will involve the implementation of optimization algorithms. Yet another will involve the operation of an EIT measurement device that has been constructed. A final direction will involve software development to streamline the operation of the EIT device and running of the imaging algorithms.

Supervisors: Spyros Alexakis and Adam Stinchcombe