

DEPARTMENT EIT LAB NEWS

PROFESSOR JENNIFER MUELLER

The members of the EIT lab have been studying circuits and their components. A recent project in the lab was to build pulse oximeters, which measure blood-oxygen levels using an infrared sensor applied to the subject's finger. PhD student Michelle Mellenthin of the School of Biomedical Engineering has been leading the circuit labs. While the mathematics of circuit analysis is not deep, it is important to understand the hardware components of the electrical impedance tomography (EIT) system that measures the data for the reconstruction algorithm. EIT is a technology with applications in medical imaging, industrial processing, and geophysics in which the electrical properties of a medium are recovered from current-to-voltage data (mathematically a Dirichlet-to-Neumann map) and mapped to form an image. This fall, the lab is focusing on current source design.

