

Inverse transport in Optical Tomography and Optical Molecular Imaging

Guillaume Bal
Columbia University

Abstract

Optical tomography (OT) and optical molecular imaging (OMI) are emerging medical imaging techniques. Both are based on the physical propagation of near infra red photons through (human or animal) tissues. Mathematically, OT seeks the constitutive parameters in a transport equation from boundary measurements, whereas OMI is a transport inverse source problem. I will review available results in inverse transport theory and will mention several open research areas.