

1106-35-864

**Sebastian Acosta\*** ([sacosta@bcm.edu](mailto:sacosta@bcm.edu)). *Time reversal and inverse problems for radiative transport.*

The goal of our work is to estimate the absorption coefficient from measurements of the outgoing photons after they have traveled through turbid media. This problem arises in biomedical applications such as imaging of biological tissues with near-infrared light, and optical molecular imaging. Our work proposes an iterative technique, which accounts for the scattering effects, to reconstruct the unknown parameters in the transport equation. We prove convergence results. (Received September 08, 2014)