

1056-35-1970

**Guillaume Bal\*** (gb2030@columbia.edu), 500 W 120th St, New York, NY 10027. *Inverse diffusion with internal measurements.*

Photoacoustics is a novel medical imaging modality combining the large contrast of optical waves with the high resolution of acoustic waves. In somewhat idealized settings, the inverse problem of photoacoustics may be recast as an inverse diffusion problem with internal data. I will present recent theoretical results on the reconstruction of the optical parameters (the parameters of interest) from internal data and on the stability of such reconstructions. (Received September 22, 2009)