1098-65-16 **K Ren*** (ren@math.utexas.edu), Department of Mathematics, University of Texas at Austin, 2515 Speedway, C1200, Austin, TX 78712. *Efficient Reconstruction Algorithms for Inverse Problems in Quantitative Photoacoustic Imaging.*

Inverse problems in quantitative photoacoustic tomography (QPAT) aim at reconstructing physical parameters in the radiative transport equation or the diffusion equation from absorbed energy map inside the domain. We review here several efficient non-iterative reconstruction algorithms for QPAT in non-scattering media and highly scattering media that we have developed recently. (Received October 26, 2013)