

Inverse transport and diffusion problems in photoacoustic imaging and device modeling

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Inverse problems for transport and diffusion equations find many applications in imaging and related fields. In these inverse problems, one intends to reconstruct coefficients or source terms of the equations from information regarding the solution of the equations measured at different spatial locations. We will present some numerical results on an inverse coefficient problem in photoacoustic imaging with interior data and an inverse source problem in device modeling with boundary data.

Several related computational issues will be addressed.