

# Transport-based imaging in random media

Kui Ren  
Columbia University

## **Abstract**

We consider the detection and imaging of inclusions buried in highly scattering random media. In such multiple scattering environments, the coherent wave fields are too weak to be used for imaging purposes. We thus propose to model the inclusion as a parameter in the macroscopic radiative transport equations and consider the imaging problem as an inverse transport problem. Model-based iterative schemes are then used to solve the inverse problem. Numerical reconstructions from both synthetic and experimental data will be presented. This is a joint work with Guillaume Bal.