Acoustic Source and Speed of Sound Imaging with Application to Photoacoustic Tomography: A Numerical Study

Speaker: Yang Yang, Michigan State University

Abstract: We present numerical algorithms to image passive acoustic sources (resp. speed of sound) in the absence of the speed of sound (resp. source) information. The measurement is the boundary wave field and its spatial derivatives. The algorithms are validated with numerical examples. An application scenario is the Photoacoustic Tomography, a multi-wave imaging modality where acoustic sources in unknown biological tissue are to be imaged. The presentation is based on joint work with G. Huang, J. Qian, S. Qin, R. Wang.