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Venky P Krishnan* (vkrishnan@math.tifrbng.res.in). *Microlocal analysis of an ultrasound operator with circular source and receiver trajectories.*

In this talk, we consider a problem motivated by ultrasound reflection tomography. In our model, the ultrasound emitter and receiver move at a constant distance apart along a circle. We analyze the microlocal properties of the transform that arises from this model. As a consequence, we show the unique recovery of a function from this transform under an assumption of smallness of its support. This is joint work with Gaik Ambartsoumian of University of Texas at Arlington and Eric Todd Quinto of Tufts University. (Received September 21, 2011)