Travel Time Tomography, Boundary Rigidity and Lens Rigidity
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In this course we will discuss travel time tomography. This inverse problem consists on determining the internal properties of a medium by measuring the travel times of waves going through the medium. This problem arises in global seismology, oil exploration, medical imaging and ocean acoustics among several areas of applications.

Travel time tomography is also related to the boundary rigidity problem and lens rigidity problem considered in differential geometry. This connection will also be discussed.