1125-35-899 **Josselin Garnier*** (josselin.garnier@polytechnique.edu), Department of Applied Mathematics, Ecole Polytechnique, 91128 Palaiseau, France. *Imaging with intensity cross correlations and application to ghost imaging.*

In sensor array imaging the data recorded by an array of receivers and emitted by an array of sources are processed to produce an image of the object that is illuminated. In this talk we analyze an imaging method called ghost imaging that can produce an image of an object by correlating the intensities measured by a high-resolution (multi-pixel) detector that does not view the object and a low-resolution (single-pixel) detector that does view the object. This gives the principle of a one-pixel camera. We clarify the roles of the partial coherence of the source that illuminates the object and of the scattering properties of the medium through which the waves propagate. (Received September 13, 2016)