1125-44-141 **Fatma Terzioglu*** (`fatma@math.tamu.edu`) and **Peter Kuchment** (`kuchment@math.tamu.edu`).
Image Reconstruction from Compton Camera Data.

In this presentation, we address analytically and numerically the inversion of the integral transform (*cone* or *Compton* transform) that maps a function on $\mathbb{R}^n$ to its integrals over conical surfaces. It arises in a variety of imaging techniques, e.g. in astronomy, optical imaging, and homeland security imaging, especially when the so called Compton cameras are involved. We present several inversion formulas for the cone transform and the results of their numerical implementation in two and three dimensions. (Received September 01, 2016)