1145-32-2152   **Soledad Villar*** (`soledad.villar@nyu.edu`). *SUNLayer: stable denoising with generative models.* Preliminary report.

Recent developments in deep neural networks have produced impressive generative models for real world data. Such generative models can be successfully exploited to solve classical inverse problems like compressed sensing, phase retrieval and super resolution. In this work we focus on the classical signal processing problem of image denoising. We propose a theoretical setting that uses spherical harmonics to identify what mathematical properties of the activation functions will allow signal denoising with local methods. (Received September 24, 2018)