1120-42-143 **Roza Aceska*** (`raceska@bsu.edu`), Muncie, IN 47304, and **Jean Luc Bouchot** and **Shidong Li**. *Local sparsity and fusion frames.*

We analyze the problem of recovering signals from low quality sensing devices, and implement a combination of compressed sensing and distributed sensing to model so-called fusion frames structured signals.

Within our framework, it is possible to recover signals with high accuracy by increasing the number of measurements. We show that, under suitable constraints, nonsparse signals can be recovered with high probability. Moreover, we show that, with the use of a few linear measurements, cheap sensors are sufficient when combined with the fusion frame methodology. (Received February 19, 2016)