1077-55-1709 **Justin Michael Curry*** (`jucurry@math.upenn.edu`). *Obstruction-Theoretic Sensing.* Preliminary report.

This talk outlines a vision for obstruction-theoretic sensing. Motivation for such a proposal stems from two primary observations: (1) that modern applications increasingly require a systematic way of handling data living over a base space and (2) that the classical machinery of sheaves and vector bundles provides a unified language as well as topological forcing results. This talk goes on to describe a new class of pursuit-and-evasion problems, which serves as a testing ground for these ideas. (Received September 20, 2011)