

1123-05-381

Kirk Boyer, Paul Horn* (paul.horn@du.edu) and **Mario Lopez**. *The combinatorics of ray sensor networks.*

In this talk we'll discuss some interesting problems in combinatorics and discrete geometry that arise when studying a very simple model of sensor networks. We will describe a way of forming a graph from ray sensor networks, and study the properties of such graphs – including proving a type of rigidity theorem that allows us to understand how rare these graphs are. We will also describe a very natural generalization of the initial problem that leads immediately to some very nice extremal problem in discrete geometry. Some algorithmic issues will also be discussed. (Received August 30, 2016)