1147-05-603　　　　**Maryam Farahmand***, mfarahmand@math.berkeley.edu, and **Matthias Beck**, mattbeck@sfsu.edu. *Partially magic labeling and the antimagic graph conjecture.*

The Antimagic Graph Conjecture asserts that every connected graph $G = (V, E)$ except K_2 admits an edge labeling such that each label $1, 2, \ldots, |E|$ is used exactly once and the sums of the labels of the edges incident to each vertex are distinct. On the other extreme, an edge labeling is magic if the sums of the labels on all edges incident to each vertex are the same. In this talk we will explain how we approached antimagic labelings by introducing partially magic labelings, where "magic occurs" just in a subset of V and how we generalized Stanley's theorem about the magic graph labeling counting function to the associated counting function of partially magic labelings. At the end we will introduce relaxed antimagic labelings (for which label repetition is allowed), and we show that every bipartite graph satisfies a weakened version of the Antimagic Graph Conjecture. (Received January 27, 2019)

1