

1125-03-120

**Clinton Conley\*** ([clintonc@andrew.cmu.edu](mailto:clintonc@andrew.cmu.edu)). *Measurable chromatic numbers.*

The chromatic number of a graph, the least number of colors required to paint the vertices so that no two adjacent vertices share a color, can change drastically when various measurability constraints are placed on the coloring function. In this talk we survey several results over the past few years analyzing Borel and  $\mu$ -measurable (with respect to some fixed Borel probability measure  $\mu$ ) chromatic numbers, highlighting connections with ergodic theory. In particular, we pay special attention to graphs with hyperfinite/amenable connectedness relation: even in this special case the ability to discard a null set can have a big impact on how many colors are necessary. The talk will include joint work with Jackson, Kechris, Marks, Miller, Seward, and Tucker-Drob. (Received September 20, 2016)