

1125-VF-1745 **Peter Maceli*** (peter.maceli@canisius.edu). *Coloring graphs and their complements.*

Nordhaus and Gaddum showed that for any graph the sum of its chromatic number together with the chromatic number of its complement is at most one more than the number of vertices in the graph. The class of graphs which satisfy this upper bound with equality have long been understood, however not much beyond this initial case is known in terms of characterizing graphs via this sum of complementary chromatic numbers. In this talk, we will discuss how adopting a more structural approach to this general problem leads to an interesting method of graph decomposition, which in turn allows one to generalize and extend several previous results. (Received September 19, 2016)