Incidence Coloring on Some Graphs

P. K. Sun

Department of Mathematics, City University of Hong Kong, Hong Kong pakksun@cityu.edu.hk

Incidence coloring of a graph G is a mapping from the set of incidences to a colorset C such that adjacent incidences of G are assigned distinct colors. Since 1993, there are numerous fruitful results among incidence coloring were proved. By establishing the relation between incidence coloring and vertex coloring of the square of a graph. we proved the incidence chromatic number of the outerplanar graphs with $\Delta \geq 7$ equals to $\Delta + 1$. Finally, some recent results about incidence coloring of outerplanar graphs with $\Delta \leq 6$ and the complexity of incidence coloring will be discussed.