

## The List Distinguishing Number of Graphs

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A graph  $G$  is said to be  $k$ -distinguishable [1] if the vertex set can be colored using  $k$  colors such that no nontrivial automorphism of  $G$  fixes all the color classes. Distinguishing number  $D(G)$  is the least  $k$  for which  $G$  is  $k$ -distinguishable.

A graph  $G$  is said to be  $k$ -list distinguishable [3] if each of the vertices can be colored from corresponding given lists of size  $k$  such that  $G$  is  $k$ -distinguishable. List distinguishing number  $D_l(G)$  is the least  $k$  for which  $G$  is  $k$ -list distinguishable. In this talk we discuss some results supporting the conjecture [3] that  $D(G) = D_l(G)$  for any graph  $G$ . We discuss another statement [2] which strengthen the conjecture [3].

### References

- [1] M. O. Albertson, K. L. Collins, Symmetry Breaking in Graphs. *Electron. J. Combin.* **3** (1996) 18.
- [2] N. Balachandran, S. Padinhatteeri, The List Distinguishing Number of Kneser Graphs. <http://arxiv.org/abs/1602.03741>.
- [3] M. Ferrara, B. Flesch, E. Gethner, List-Distinguishing Coloring of Graphs. *Electron. J. Combin.* **18** (2011) 161.