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

