THE b-CHROMATIC NUMBER IN REGULAR GRAPHS

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A *b*-coloring of the vertices of a graph G is a proper coloring where each color class contains a vertex which is adjacent to a vertex in each other color class. The b-chromatic number of G is the maximum integer $\chi_b(G)$ for which G has a *b*-coloring with $\chi_b(G)$ colors. In our poster we give some partial results for one of the most important conjectures regarding the b-chromatic number of regular graphs which was first posted by El Sahili and Kouider in 2009:

Every d-regular graph of girth at least 5, different than the Petersen graph, has a b-coloring with $d + 1$ colors.

References

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