Vertex arboricity of planar graphs

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Abstract

The vertex-arboricity $a(G)$ of a graph G is the minimum number of subsets into which the set of vertices of G can be partitioned so that each subset induces a forest. In this talk, we give a survey on the research progress of the vertex-arboricity and list vertex-arboricity of graphs. We show that every planar graph G without adjacent 3-cycles has $a(G) \leq 2$, which resolves a conjecture of Raspaud and Wang in 2008.

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