HOW TO GENERALIZE CIRCULAR COLORING?

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$r$-circular coloring of a graph $G$ is an assignment of open unit-length arcs on an euclidean circle of length $r$, such that adjacent vertices get disjoint arcs. It was introduced in [1] and has attracted considerable attention since, including many variations. For a survey we refer to [2] and [3]. This concept has interesting applications for processes performed in a cyclic, continuous way - but the real world can motivate some modifications of the aforementioned definition, for example additional constraints.

In this talk we propose a generalization of circular coloring (in fact: for weighted relational systems) constructed to generalize many reasonable modifications of circular coloring. Related work was presented in [4] - in our approach we go further to handle more models motivated by applications. We present some fundamental results about the proposed generalization.

Keywords: circular coloring, generalized circular coloring.

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References


