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Infinite families of $(n+1)$-dichromatic vertex critical circulant tournaments. (English)

Zbl 1291.05078

Hliněný, Petr (ed.) et al., 6th Czech-Slovak international symposium on combinatorics, graph theory, algorithms and applications, DIMATIA Center, Charles University, Prague, Czech Republic, July 10–16, 2006. Amsterdam: Elsevier. Electronic Notes in Discrete Mathematics 28, 141-144 (2007).

Summary: In this talk we expose the results about infinite families of vertex critical r-dichromatic circulant tournaments for all $r \geq 3$. The existence of these infinite families was conjectured by *V. Neumann-Lara* [Discrete Math. 170, No. 1–3, 289–291 (1997; Zbl 0876.05039)], who later proved it for all $r \geq 3$ and $r \neq 7$. Using different methods we find explicit constructions of these infinite families for all $r \geq 3$, including the case when $r = 7$, which complete the proof of the conjecture.

For the entire collection see [Zbl 1109.05007].

MSC:

05C20 Directed graphs (digraphs), tournaments
05C15 Coloring of graphs and hypergraphs

Keywords:

digraph; circulant tournament; dichromatic number

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