

Pan-partition Transitive Realizations

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Abstract

A tournament is an oriented complete graph. There are many conditions that assure that a non increasing sequence $s_1 \geq s_2 \geq \dots \geq s_n$ are the scores (out degrees) of the vertices of a tournament. Furthermore, given a realizable score sequence, there are possibly many tournaments that have that sequence as its score sequence.

In this paper we explore the existence of realizations of a sequence having a partition of the vertices, each part of which induces a transitive tournament. This extends work of Brualdi and Shen and Guiduli, Gyárfás, Thomassé and Weidl.