

Threshold Digraphs

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Abstract

A digraph whose degree sequence has a unique vertex labeled realization is called threshold. In this talk I will present several characterizations of threshold digraphs and their degree sequences, and show these characterizations to be equivalent. One of the characterizations is new, and allows for a shorter proof of the equivalence of the two known characterizations as well as proving the final characterization which appears without proof in the literature. Using this result, we obtain a new, short proof of the Fulkerson-Chen theorem on degree sequences of general digraphs.

Keywords: digraph, threshold, degree sequence.