

An Erdős-Chvátal like result

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Abstract

A famed result of Erdős and Chvátal gives sufficient conditions for a spanning cycle and spanning path. These conditions relate the independence number and connectivity of a graph. We found a similar relationship guaranteeing a vertex common to all longest paths in a graph. Vertices common to every longest path are called Gallai vertices. In this talk I will follow our path of discovery to explain how we came about the result defining key terms and some of the techniques developed for the proof.