Shan, Haiying; Wang, Zhiyi; Wang, Feifei
The smallest spectral radius of bicyclic uniform hypergraphs with a given size.  
(English)  
Zbl 1465.05122
Linear Algebra Appl. 622, 166-188 (2021).

Summary: Identifying graphs with extremal properties is an extensively studied topic in spectral graph theory. In this paper, we study the log-concavity of a type of iteration sequence related to the α-normal weighted incidence matrices which is presented by L. Lu and S. Man [ibid. 509, 206–227 (2016; Zbl 1346.05171)] for computing the spectral radius of hypergraphs. By using results obtained about the sequence and the method of some edge operations, we will characterize completely extremal k-graphs with the smallest spectral radius among bicyclic hypergraphs with given size.

MSC:
05C65  Hypergraphs
05C50  Graphs and linear algebra (matrices, eigenvalues, etc.)
15A18  Eigenvalues, singular values, and eigenvectors

Keywords:
bicyclic hypergraph; spectral radius; weighted incidence matrix; log-concave sequence

Full Text: DOI

References:

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.