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**Which nonnegative matrices are slack matrices?** (English) Zbl 1283.15103

Linear Algebra Appl. 439, No. 10, 2921-2933 (2013).

Summary: We characterize the slack matrices of cones and polytopes among all nonnegative matrices. This leads to an algorithm for deciding whether a given matrix is a slack matrix. The underlying decision problem is equivalent to the polyhedral verification problem whose complexity is unknown.

**MSC:**

[15B48](#) Positive matrices and their generalizations; cones of matrices

[52B11](#)  $n$ -dimensional polytopes

[65F30](#) Other matrix algorithms (MSC2010)

Cited in **10** Documents

**Keywords:**

[slack matrices](#); [polyhedral cones](#); [polytopes](#); [polyhedral verification problem](#); [algorithm](#)

**Full Text:** [DOI](#) [arXiv](#)

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