



Tensors of Nonnegative Rank Two

Elizabeth S. Allman, John A. Rhodes, Bernd Sturmfels, Piotr Zwiernik

(Submitted on 2 May 2013)

A nonnegative tensor has nonnegative rank at most 2 if and only if it is supermodular and has flattening rank at most 2. We prove this result, then explore the semialgebraic geometry of the general Markov model on phylogenetic trees with binary states, and comment on possible extensions to tensors of higher rank.

Comments: 22 pages, 1 figure

Subjects: **Algebraic Geometry (math.AG)**; Statistics Theory (math.ST)

MSC classes: 15A69, 62H17, 14P10

Cite as: **arXiv:1305.0539 [math.AG]**

(or **arXiv:1305.0539v1 [math.AG]** for this version)

Submission history

From: John Rhodes [view email]

[v1] Thu, 2 May 2013 19:07:49 GMT (519kb,D)

Which authors of this paper are endorsers?

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- PDF
- Other formats

Current browse context:

math.AG

< prev | next >

new | recent | 1305

Change to browse by:

math

math.ST

stat

References & Citations

- NASA ADS

Bookmark (what is this?)

