

Accepted Manuscript

Optimization via separated representations and the canonical tensor decomposition

Matthew J. Reynolds, Gregory Beylkin, Alireza Doostan

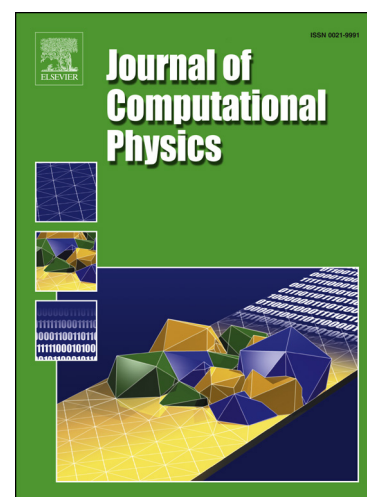
PII: S0021-9991(17)30514-4
DOI: <http://dx.doi.org/10.1016/j.jcp.2017.07.012>
Reference: YJCPH 7459

To appear in: *Journal of Computational Physics*

Received date: 3 September 2016
Revised date: 5 April 2017
Accepted date: 6 July 2017

Please cite this article in press as: M.J. Reynolds et al., Optimization via separated representations and the canonical tensor decomposition, *J. Comput. Phys.* (2017), <http://dx.doi.org/10.1016/j.jcp.2017.07.012>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Highlights

- A new algorithm for finding maximum absolute value entries of tensors represented in the canonical format is presented.
- The new algorithm is quadratically convergent; existing methods for the same problem are only linearly convergent.
- The algorithm for finding maximum absolute value entries of tensors can be extended to finding global maxima of non-convex multivariate functions, as long as the functions are in separated form.

Download English Version:

<https://daneshyari.com/en/article/4967172>

Download Persian Version:

<https://daneshyari.com/article/4967172>

[Daneshyari.com](https://daneshyari.com)