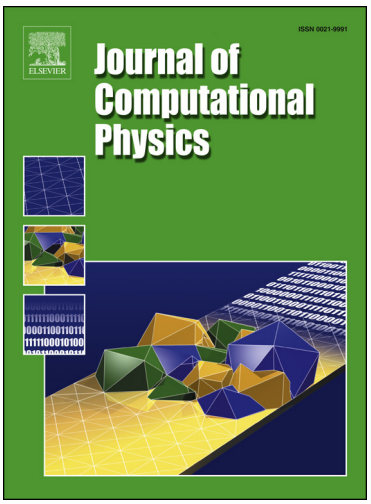
Accepted Manuscript



Entropy-Stable Summation-By-Parts Discretization of the Euler Equations on General Curved Elements

Jared Crean, Jason E. Hicken, David C. Del Rey Fernández, David W. Zingg, Mark H. Carpenter

PII: S0021-9991(17)30899-9
DOI: https://doi.org/10.1016/j.jcp.2017.12.015
Reference: YJCPH 7752

To appear in: *Journal of Computational Physics*

Received date: 26 April 2017
Revised date: 27 September 2017
Accepted date: 10 December 2017

Please cite this article in press as: J. Crean et al., Entropy-Stable Summation-By-Parts Discretization of the Euler Equations on General Curved Elements, *J. Comput. Phys.* (2017), https://doi.org/10.1016/j.jcp.2017.12.015

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

- Entropy-stable, SBP discretizations for non-tensor product, curved elements.
- Polynomial mappings can be at most one degree higher than the SBP operators.
- 3D mapping Jacobian found by solving an elementwise optimization problem.
- Numerical experiements verify entropy stability and accuracy.

Download English Version:

https://daneshyari.com/en/article/6929179

Download Persian Version:

https://daneshyari.com/article/6929179

Daneshyari.com