

# Accepted Manuscript

Second derivative time integration methods for discontinuous Galerkin solutions of unsteady compressible flows

A. Nigro, C. De Bartolo, A. Crivellini, F. Bassi

PII: S0021-9991(17)30630-7  
DOI: <http://dx.doi.org/10.1016/j.jcp.2017.08.049>  
Reference: YJCPH 7551

To appear in: *Journal of Computational Physics*

Received date: 27 March 2017  
Revised date: 20 August 2017  
Accepted date: 23 August 2017

Please cite this article in press as: A. Nigro et al., Second derivative time integration methods for discontinuous Galerkin solutions of unsteady compressible flows, *J. Comput. Phys.* (2017), <http://dx.doi.org/10.1016/j.jcp.2017.08.049>

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

- Second Derivative (SD) Enright method applied to DG discretized NS equations.
- SD implementation for autonomous and non-autonomous systems.
- Matrix-free approach applied to the nonlinear function evaluation as well.
- Assessment of the 4th-order SD scheme for inviscid and laminar simulations.
- SD4 scheme more effective as compared with MEBDF4 for long time simulations.

Download English Version:

<https://daneshyari.com/en/article/4967088>

Download Persian Version:

<https://daneshyari.com/article/4967088>

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