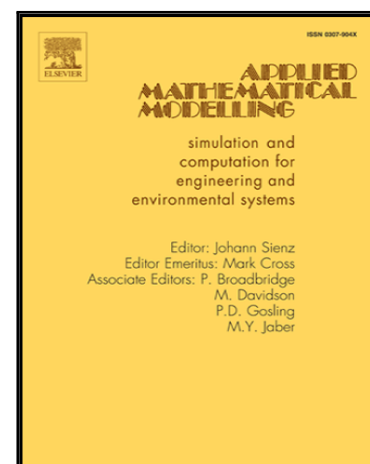


Accepted Manuscript

Aerodynamic optimisation of a hypersonic reentry vehicle based on solution of the Boltzmann–BGK equation and Evolutionary Optimisation

B. Evans, S.P. Walton

PII: S0307-904X(17)30462-6
DOI: [10.1016/j.apm.2017.07.024](https://doi.org/10.1016/j.apm.2017.07.024)
Reference: APM 11874



To appear in: *Applied Mathematical Modelling*

Received date: 12 March 2017
Revised date: 29 June 2017
Accepted date: 18 July 2017

Please cite this article as: B. Evans, S.P. Walton, Aerodynamic optimisation of a hypersonic reentry vehicle based on solution of the Boltzmann–BGK equation and Evolutionary Optimisation, *Applied Mathematical Modelling* (2017), doi: [10.1016/j.apm.2017.07.024](https://doi.org/10.1016/j.apm.2017.07.024)

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

- An original approach for solving optimal design of a space vehicle in rarefied hypersonic flow
- Novel flow solver based on the solution of the Boltzmann–BGK equation.
- First ever coupling of Boltzmann solver to an evolutionary optimiser
- Boltzmann–BGK solver rigorously tested on a number of examples

Download English Version:

<https://daneshyari.com/en/article/5470728>

Download Persian Version:

<https://daneshyari.com/article/5470728>

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