



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2014_BJMCS_14139
Title of the Manuscript:	Quarter-Step Continuous Hybrid Block Method for First-Order Ordinary Differential Equations
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	(1) It is not clear that the method is a continuous scheme. I suggest that the author(s) consult the following article: “Continuous numerical methods for ODEs with defect control” by W.H. Enright, Journal of Computational and Applied Mathematics 03/2001; DOI: 10.1016/S0377-0427(00)00466-0 (2) The efficiency of a numerical method depends on several factors including the number of function evaluations (NFEs). I will suggest that the author(s) discuss the NFEs of their method and indicate how their method is efficient on the tested examples in light of the NFEs.	(1) The word "continuous" has been deleted. (2) The method has 6 function evaluations per step. This explains why it performs well on the problems it was tested on.
Minor REVISION comments	(1) Line 7: The authors say that "the evaluation is carried out at grid and off grid points" However, this is not clear in section 2.1 and thereafter. (2) Line 20: "exist" should read "exists" (3) Line 31-32: Author s talk of hybrid method giving better result on stiff and oscillatory problems. I will suggest the authors include examples such as those in: Ramos H, Vigo-Aguiar J (2010) On the frequency choice	(1) It has been corrected. The evaluation is carried out at off grid points (2) Corrected (3) The paper is aimed at solving first order ODEs and two concrete examples have been considered. The authors only mentioned some additional advantages of hybrid methods to include "giving better result on stiff and oscillatory



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	in trigonometrically fitted methods. Appl Math Lett 23:1378-1381 Nguyen H, Sidje R, Cong N (2007) Analysis of trigonometric implicit Runge-Kutta methods. J Comput Appl Math 198:187-207 Ozawa K (2005) A functionally fitted three-stage explicit singly diagonally implicit Runge-Kutta method. Japan J Indust Appl Math 22:403-427 Simos T (1998) An exponentially-fitted Runge-Kutta method for the numerical integration of initial-value problems with periodic or oscillating solutions. Comput Phys Commun 115:	problems”
<u>Optional/General</u> comments	Line 45 and thereafter: Not sure that $j=0(1)7$ is standard. I will suggest the authors use a different notation.	This is a general representation use anywhere. It is obvious that $j=0(1)7$ means $j=0,1,2,...,7$