



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2014_BJMCS_14738
Title of the Manuscript:	AN OPTIMIZATION PROBLEM WITH CONTROLS IN THE COEFFICIENTS OF PARABOLIC 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.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

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)
<u>Compulsory</u> REVISION comments	<i>The author has to add a new paragraph at the end of the article, with an example of parabolic optimal boundary control problem optimised with this method.</i>	A parabolic optimal boundary control problem is accepted for publishing in International Journal of Computational Engineering Research. Therefore, the numerical solution of the considering optimal control problem will be reported later.
<u>Minor</u> REVISION comments	<i>In the conclusion the author must highlight some advantages and disadvantages of the proposed method in relation with other existing methods.</i>	In [4], the existence and uniqueness theorem is proved under constrained problem with control space E_N but here the space of controls $v \in L_2(\Omega)$ are respected to x, t . Also, in [4] the coefficient of higher-order derivatives was $\lambda(u(x, t), v)$, but in the present paper it is $\lambda(x, t, v)$. In this paper, an optimal control parabolic problem is studied. The existence and uniqueness theorem for the solving optimal control parabolic problem is proved. Also, a theorem for the sufficient differentiability conditions of the functional and its gradient formulae has been proved. A parabolic optimal boundary control problem is accepted for publishing in International Journal of Computational Engineering Research. Therefore, the numerical solution of the considering optimal control problem will be reported later.
<u>Optional/General</u> comments	<i>In this paper has been presented an interesting theory about parabolic optimal boundary control problem. The presented theory is very good introduced and the algorithm is clear and correct. A practical example and some advantages and disadvantages are missing.</i>	The authors would like to thank the anonymous referees for their valuable comments that improved the quality of this paper.