



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	Theoretical

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)
<u>Compulsory</u> REVISION comments	In Introduction provide a literature survey and the scope and justification of the work done. There is a lack of the similar papers' comparison and analysis in the introduction. There should be underlined the objectives of considering paper.	The optimal control of systems described by partial differential equations has received increasing attention in recent years. Many of the problems of control in air-frames design, shipbuilding industry, magneto- hydrodynamics and other engineering field are problems of control of systems with distributed parameter systems [1-4]. 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.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		