



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.

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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. I can't find the assumptions as claimed by the authors in PROPOSITION A. 2. The REFERENCES need to be revised carefully.	1) On the assumptions of the considering optimal control problem (1)-(4) and from [6] follows that the boundary problem for a given $v \in V$ has existence, uniqueness solution and the following estimation holds: 2) I added new REFERENCES.
Minor REVISION comments	1. In Abstract, Introduction, and Conclusion, "an parabolic optimal ..." should be "a parabolic optimal ..." 2. In Keywords and References some capital letters should be corrected. 3. The sentences after equation (3) and the sentences after equation (4) should be corrected. 4. Before equation (4), "minimize the functional" should be "minimize the function". 5. At the beginning of the proof of Theorem 1, "estimationfor" should be "estimation for". 6. Briefly explain why $L_2(\omega)$ is a uniformly convex space on page 4. 7. In Theorem 2, "Frechetin" should be "Frechet in".	Abstract: 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. Keywords: Optimal control parabolic problems, Existence and uniqueness theorems, Adjoint system, sufficient differentiability conditions, Gradient formulae. why $L_2(\omega)$ is a uniformly convex space in [6] Theorem 2: Let the above assumptions A1-A2



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		be satisfied. Then the functional $J_{\alpha}(v)$ is continuously differentiable by Fréchet in V , and its gradient satisfies the equality
<u>Optional/General</u> comments	1. "Cauchy Benyakoviskii" may be "Cauchy-Schwarz"	Cauchy-Bunyakovsky Inequality