



SDI FINAL EVALUATION FORM 1.1

PART 1:

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

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
The newly provided definitions are not precise: In the functional spaces one requires the integrals to be finite which should be stressed; the Weierstrass Theorem should be recalled and stated, since, as can be understood, it is not a standard one - and the reference to an obscure Russian book is not the best citation as it is not the easiest source to be looked up.	Further we need the following theorem. Theorem A: (a corollary of the Goebel theorem [7]). Assume that $\tilde{X}$ is a uniformly convex space, U is a closed bounded set on $\tilde{X}$, a functional $I(v)$ is lower semicontinuous and bounded from below on U, and $\alpha > 0$ is a given number. Then there exists a dense subset K of the space $\tilde{X}$ such that for any $\omega \in K$ the functional $J_\alpha(v) = I(v) + \alpha \ v - \omega\ _{\tilde{X}}^2$ attains its minimal value on U at a unique element. Now we prove the last part as follows: hence we get the continuity of the functional $J_0(v)$ on any element $v \in V$, i.e., on the set V. The latter set is a closed bounded convex subset of the uniformly convex space $L_2(\Omega)$ [10]. Then due to Theorem A and the boundedness and continuity of the functional $J_0(v)$ on the set V, there exists an everywhere dense subset K of the space $L_2(\Omega)$ such that $\forall \omega \in K$ with $\alpha > 0$ problem (1)–(4) has a unique solution. This completes the proof of Theorem 1. [10] K. Yosida, Functional analysis, Springer-Verlag, Berlin–Heidelberg–NewYork, 1965; Mir, Moscow, 1967.