

**Review Form 3**

Journal Name:	<a href="#">Asian Research Journal of Mathematics</a>
Manuscript Number:	Ms_ARJOM_125491
Title of the Manuscript:	ON SOME TOPOLOGICAL PROPERTIES OF $C_h(X)$ AND OF THE DUAL OPERATOR
Type of the Article	Original Research Article

### Review Form 3

#### **PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	<b>Reviewer's comment</b>	<b>Author's Feedback</b> <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</b>		
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>		
<b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b>		
<b>Are subsections and structure of the manuscript appropriate?</b>		
<b>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</b>		
<b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b> :		

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<p>Minor REVISION comments</p> <p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>		
<p><b>Optional/General</b> comments</p>	<p>This paper investigates various topological properties of certain function spaces endowed with the hypo-topology, a topology of interest in optimization and calculus of variations. The study extends to properties of dual operators associated with continuous functions over a Tychonoff space <math>X</math>, aiming to characterize conditions under which these dual operators are injective, surjective, or embeddings. The manuscript also explores the continuity of homomorphisms in hypo-topology and provides insights into the weak hypo-topology.</p> <p>The paper addresses a specialized area in functional analysis and topology, presenting a structured exploration of hypo-topology and related operator properties. The topic is relevant and potentially impactful, given its implications in theoretical aspects of functional analysis and applications in optimization theory. However, while the study makes important theoretical contributions, the presentation and structure need refinement to enhance readability and logical flow. Additionally, clarifications are needed for key definitions, and several proofs require more detail for precision. I have some remarks:</p> <ol style="list-style-type: none"> <li>1. The introduction provides a useful context by highlighting the relevance of hypo-topology in calculus of variations and optimization. A stronger motivation for the study's objectives could help readers unfamiliar with hypo-topology understand its importance. Also, clarifying the practical applications of these topological properties would be beneficial, as they are only briefly mentioned.</li> <li>2. The paper introduces several key concepts, such as hypo-functions, hypo-topology, and the continuity of specific operators. However, definitions are often dense and not entirely intuitive. Introducing these concepts more gradually with examples and contextual explanations would help readers better grasp them. Additionally, some notations, such as for the hypograph and dual operators, could be clarified by defining their roles explicitly in each theorem or proof section.</li> <li>3. Including more recent works on hypo-topology or similar topological studies would situate the paper within the current research landscape. If any of the cited works directly influenced specific proofs, explicit mentions in the text would enhance context.</li> </ol> <p>I suggest major revision.</p>	

**PART 2:**

	<p><b>Reviewer's comment</b></p>	<p><b>Author's comment</b> (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)</p>
<p><b>Are there ethical issues in this manuscript?</b></p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

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