|  |
| --- |
|  |
| Journal Name: | [**Journal of Advances in Mathematics and Computer Science**](https://journaljamcs.com/index.php/JAMCS) |
| Manuscript Number: | **Ms\_JAMCS\_132707** |
| Title of the Manuscript:  | **CONDITIONS FOR CONVEX OPTIMIZATION IN Lp-SPACES** |
| Type of the Article | **Original Research Article** |

|  |
| --- |
| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | In this manuscript authors established the optimality conditions for convex optimization in $L^{p}$-spaces. Also, they proved that if a lower semi-continuous function $ϑ:L\rightarrow \overbar{R}$ is Lipschitz continuous in an $L^{p}$-space$L$, then it is weakly lower semi-continuous and must attain a unique global minimizer for the convex optimization problem $\min\_{q\in G}ϑ(q)$ on a sequentially bounded convex constraint set $G$. Further they provided necessary conditions for optimality using the concepts of compactness and coercivity of semi-continuous functions on sequentially bounded domains. Finally, they proved the existence of minimizers using the concepts of Gate$\acute{a}$ux and Fr$\acute{e}$chet differentiability |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **Yes, it is suitable** |  |
| 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. | **Yes** |  |
| Is the manuscript scientifically, correct? Please write here. | In my view, the manuscript is scientifically correct. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes, they are sufficient |  |
| Is the language/English quality of the article suitable for scholarly communications? | Suitable. |  |
| Optional/General comments | From my point of view, the authors some more relevant and recent developments should be cited. I feel that this paper can be accepted for publication in the journal `[**Journal of Advances in Mathematics and Computer Science**](https://journaljamcs.com/index.php/JAMCS)**’** |  |

|  |
| --- |
| **PART 2:**  |
|  | **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)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

**Reviewer Details:**

**Dasari Ratna Babu, PSCMR College of Engineering & Technology, India**