



**SDI Review Form 1.6**

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| Journal Name:            | <b><u>British Journal of Mathematics &amp; Computer Science</u></b> |
| Manuscript Number:       | <b>2014_BJMCS_14868</b>                                             |
| Title of the Manuscript: | <b>A short note on weak estimation of Sharp function</b>            |
| Type of the Article      | <b>Original Research Article</b>                                    |

**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.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

|                                     | <b>Reviewer's comment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Author's comment</b> <i>(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)</i>                                         |
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| <b>Compulsory</b> REVISION comments | <p>The authors consider interesting problem of sharp function belonging in the field of functional analysis, and with possible application in digital digital image processing.</p> <p>The presentation has several weak points addressed below, which prevent me to recommend the paper for publication in BJMCS journal as it is. However, I see a possibility to brush the paper up to higher quality level in order to be acceptable.</p> <p>The authors should carefully address the following major comments and take into the account the minor comments as well.</p> <p><b>Major comments</b></p> <p>✧ The authors should make more clear what they have done in the Introduction, emphasize key concepts of their approach, and, if possible, write a summary of known theoretical results, which are connected to sharp function and/or Marcinkiewicz theorem (including the reference of the original proof).</p> <p>✧ Citations should be properly placed and used throughout the manuscript. There is a list</p> | <p>Ok, thanks. We have tried to improve the manuscript by incorporating suggestions of learned referee.</p> <p>Tried to make more clear and corrected typos.</p> <p>Suggestions incorporated and highlighted in the manuscript.</p> |



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|  | <p>of 13 references, but the authors cite only the references [2] and [3], and only in the Abstract and Introduction. References [8,9,10] should be used in the Introduction.</p> <p>✧ Page 4, between Definition 2.6 and proof of Theorem 2.5: There should be a short introductory paragraph explaining a motivation to introduce the p-mean oscillation property.</p> <p>✧ Page 6, beginning of Section 3: Statement that the sharp function is a very powerful tool (tool for what?) is not sufficient. This term is in the focus of the paper, thus there should be a proper introductory text (with references), which helps a reader to better understand this concept.</p> <p>✧ I am missing any conclusion and discussion. Authors should summarize their work, evaluate their approach, and, if possible, emphasize their contribution and sketch out any possible application.</p> <p><b>Minor comments</b></p> <p>✧ Page 1, line 4 from below: in proving the Marcinkiewicz! in proof of the Marcinkiewicz</p> <p>✧ Page 1, line 2 from below: includes the proof of Lebesgue! includes a proof of the Lebesgue</p> <p>✧ Page 2, line 3 from the rst paragraph: maximal function was developed to solve a problem in the theory of functions of complex variable. ! maximal function nds its application, e.g., in proof of the Lebesgue differentiation theorem, the Rademachers di</p> | <p>It is clearly mentioned in 1<sup>st</sup> paragraph of the introduction.<br/>Tried to clarify the concept with the help of Example 2.4.</p> <p>Application of Sharp function is already there in our paper Ahmad etal [1, 2]</p> <p>Not necessary as such.</p> <p>All the suggestions are taken care of and incorporated in the text. The relevant portions are highlighted in the text</p> |
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|  | <p>erentiation<br/>theorem or the Fatou's theorem.<br/>✧ Page 2, Proof of Theorem 2.4: Without loss of generality ! Without the loss of generality,<br/>✧ Page 2, Proof of Theorem 2.4: In equation (4), there is a sharp inequality. I do not see why equalities are allowed in equation (5).<br/>✧ Page 2, Proof of Theorem 2.4, line 3 from below: cubes we stop; if there are cubes ! cubes, we stop. Otherwise<br/>✧ Page 4, lines 1 - 5: There should be stated, over which set the supremum is considered. I guess there should be <math>\sup x^2 Q_j</math> .<br/>✧ Page 4, in the middle: there should be a subscript of the supremum as in my previous point.<br/>✧ Page 4, line 5 from below: sub-linear ! sublinear (as in, e.g., Denition 3.3).<br/>✧ Page 5, Example 2.7: Integration over <math>[a; b]</math> is unclear and confusing.<br/>✧ Page 6, Deniton 3.1: I do not see why there is integration over <math>R_n</math>. Shouldn't there be integration over <math>Q</math>?<br/>✧ Page 7, Denition 3.4: It would be better to dene <math>weaktype(p; q)</math> generally. It will be used in proof of the Marcinkiewicz theorem and in proof of Theorem 3.6.<br/>✧ Page 9, Theorem 3.6: How the family of operators <math>T_i</math> is indexed? It appears that there is <math>T_i</math> fo discrete <math>i</math> as well as <math>T_t</math> for continuous <math>t</math>.<br/>✧ Page 9, Proof of Theorem 3.6: The set over which the supremum is considered is missing as well.</p> |  |
|  | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |



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| <b><u>Minor</u></b> REVISION comments   |  |  |
| <b><u>Optional/General</u></b> comments |  |  |