



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2015_BJMCS_16752
Title of the Manuscript:	On non-metric covering lemmas and extended Lebesgue-differentiation theorem
Type of the Article	Original Research 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.

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

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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)
<u>Compulsory</u> REVISION comments	In this paper under review the author gives a more general non-metric version of the Besicovitch Covering Lemma concerning any size function and an extension of the Lebesgue differentiation Theorem to the more general setting of the integral of vector valued functions, as introduced in Robdera (2013) and later in Robdera and Kagiso (2013). provided the author takes into account some comments/suggestions listed below.	
<u>Minor</u> REVISION comments	Page 100: in the second line of the Introduction put a space between "measure" and "$\lambda(E)$". Page 100: in the line before Theorem 1.1 delete "all" before "important". Page 101, line 1: put a space between "$\text{supp } \mu$" and "is" and another space after "$\Omega \setminus U$" and put a comma before "where". Delete comma before "and". Page 101, line 3: replace "tools" with "tool". Page 101, line 20: put comma between "$i \in \{1, \dots, n\}$" and "$I_i \subset A$". Delete comma before "and". Page 101, line 24: in the formula at the end of the line	- Done - Done - Done - Done - Done - Done



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	probably replace “η” with “μ”; that is write $\ P\ = \max\{\mu(I_i) : I_i \in P\}$ instead of $\ P\ = \max\{\eta(I_i) : I_i \in P\}$. 7. Page 101, line 31: replace (Σ, η) with (Σ, μ). 8. Page 101, line 34: replace (Σ, η) with (Σ, μ). 9. Page 102, line 6: in the centered formula it would be better to specify who is $\mathfrak{I}$. 10. Page 102, line 17: replace “Hlder” with “Hölder”. 11. Page 102, line 33: in the centered formula put a space between “open,” and “$\mu(N)$”. 12. Page 103, line 1: put a space after “Clearly,”. 13. Page 104, line 13: in the formula of the expression of R_0 put a space after “:”. 14. Page 104, line 28: put “a” between “be” and “totally”. 15. Page 104, line 17: in the formula of the expression of R_1 put a space after “:”. 16. Page 105, line 2: put a space after “trivial”. 17. Page 105, line 19: in the centred formula put a space before $i = 1, \dots, L_1$. 18. Page 105, line 23: Replace “Repeating the process m times will give a collection” with “Repeating the process m times we will obtain a collection”. 19. Page 105, line 29: replace “proves the theorem” with “the claim follows”. 20. Page 105, line 30: in the title of the Section write “Maximal function” instead of “Maximal functions”. 21. Page 105, line 31: delete comma after section. 22. Page 106, line 11: delete comma after “measure” and put comma after “$\alpha > 0$” and before of “then”. 23. Page 106, line 13: put a space after the first formula and	7. Done 8. Done 9. Done 10. Done 11. Done 12. Done 13. Done 14. Done 15. Done 16. Done 17. Done 18. Done 19. Done 20. Done 21. Done 22. Done 23. Done
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	before of "is". 24. Page 106, line 17: replace "hypothesis" with "hypotheses" and "Lemma 3.4" with "Theorem 3.4". 25. Page 107, line 1: put a space after "Ω". 26. Page 107, line 12: put a point at the end of the centered formula. 27. Page 107, line 13: replace "Lemma 4.1" with "Proposition 4.1". 28. Page 107, line 17: put a space after "theorem." In line 18 put a point at the end of the reference. 29. Page 107, line 26: delete a round bracket , that is write "1(9)" instead of "1(9))". Delete the point after "Analysis," and put a point at the end of reference. 30. Page 107, line 28: delete the point after "Soc.," . Delete the round bracket after 142 and put a point at the end of reference. 31. Page 108, line 2: put a point at the end of reference. 32. Page 108, line 3/4: put a point instead of the comma before the title and put a point at the end of reference. 33. Page 108, line 5: put a point before the title. 34. Page 108, line 7/8: put a point instead of the comma before the title and put a point at the end of reference.	24. Done 25. Done 26. Done 27. Done 28. Done 29. Done 30. Done 31. Done 32. Done 33. Done 34. Done
<u>Optional/General</u> comments	The subject treated is of interest because it is applied in many areas of analysis, such as partial differential equations, harmonic analysis, probability, integral operators, approximation theory, etc.	