

[Review Form1.6](#)

Journal Name:	<a href="#">Journal ofAdvances inMathematics andComputer Science</a>
Manuscript Number:	Ms_JAMCS_91495
Title of the Manuscript:	THE EQUITABLE PRESENTATION FOR THE EXTENDED QUANTUM ALGEBRA $U_q(f(K,J))$
Type of the Article	Original Research Article

GeneralguidelineforPeerReviewprocess:

This journal's peer review policy states that NO manuscript should be rejected only on the basis of 'lackofNovelty', 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:

(<https://www.journaljamcs.com/index.php/JAMCS/editorial-policy> )

[Review Form1.6](#)

**PART 1:** Review Comments

	<p>Reviewer's comment</p> <p>Quantum enveloping algebras are important examples of Hopf algebra which are neither commutative nor cocommutative. The simplest and most important example of quantum enveloping algebra is <math>Uq(sl_2)</math>. Up to now, various generalizations of <math>Uq(sl_2)</math> have been studied by many mathematicians [Trans. Amer. Math. Soc., 1990, 322: 285–314, East-West J. Math., 2000, 2(2): 201–213, Comm Algebra, 2002, 30: 2191–2211 and Appl. Math. J. Chinese Univ., 2012, 27(3): 290–304]. Ji and Wang [East-West J. Math., 2000, 2(2): 201–213] introduced a class of Hopf algebras <math>Uq(f(K))</math> and studied its representations. Later, another class of Hopf algebras <math>Uq(f(K, H))</math> has been defined by Wang, Ji Qingzhong and Yang in [Comm Algebra, 2002, 30: 2191–2211].</p> <p>The authors described the representation theory and the center of <math>Uq(f(K, H))</math> in [Comm Algebra, 2002, 30: 2191–2211]. The algebras <math>Uq(f(K))</math> and <math>Uq(f(K, H))</math> are two special kinds of ambiskew polynomial rings. Hong in [Appl. Math. J.Chinese Univ., 2012, 27(3): 290–304] defined an extended quantum algebra <math>Uq(f(K, J))</math> by generalizing the Drinfeld double of enveloping algebras of Lie algebras to a double of two Hopf algebras. The Hopf algebra structures theory of <math>Uq(f(K, J))</math> has been studied in [Appl. Math. J.Chinese Univ., 2012, 27(3), 290–304]. Note that <math>Uq(f(K, J))</math> is isomorphic to <math>k(G) \otimes Uq(sl_2)</math> as algebras, but not as Hopf algebras.</p> <p>In this paper, by considering <math>Uq(f(K, J))</math> be an extended quantum enveloping algebra associated to <math>sl_2</math> it has been displayed an equitable presentation for <math>Uq(f(K, J))</math>, in which all generators appear on a more equal footing. Also, it has been showed that the equitable generators and are not invertible. Moreover, it has given a presentation for the positive even sub-algebra of <math>Uq(f(K, J))</math> by generators and relations.</p>	<p>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)</p>
<p><u>Compulsory</u> REVISION comments</p>	<ol style="list-style-type: none"> <li>1. The main motivation and contribution should be highlighted at the end of the Introduction.</li> <li>2. At the end of the Introduction, which theorems correspond to which conclusions need to be clearly stated?.</li> <li>3. In the references department, some references are old, and all references should be cited in the text in sequence. For example, the first cited item should be ref. [1]; then comes ref. [2].... Etc. The new references since last 5 years ago should be added.</li> <li>4. The Conclusion should be added at the end of the article.</li> </ol>	
<p><u>Minor</u> REVISION comments <u>Optional/General</u></p>	<p>Y Z</p>	

**PART 2:**

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

**Reviewer Details:**

<p>Name:</p>	<p><b>Sobhy El-Sayed Ibrahim</b></p>
<p>Department, University &amp; Country</p>	<p><b>Benha University, Egypt</b></p>