

Review Form 3

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_123710
Title of the Manuscript:	Research status and trend of three-dimensional force sensor
Type of the Article	Original Research Article

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>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.</p>	<p>The manuscript addresses a fundamental topic for many engineering and non- fields. Three-dimensional force sensors are widely used in-situ and in laboratory environments, and they represent crucial devices in such applications. As pointed by the authors, more research is needed to increase the accuracy and the portability these sensors, especially for aerospace and medical rehabilitation. Given the above, the manuscript aims at presenting the current research status on the development of three-dimensional force sensors and highlights the importance of further investigation.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>Personally, I agree on the title of the manuscript.</p>	
<p>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.</p>	<p>The abstract sounds clear. It introduces the general framework of the manuscript. However, after a major revision, the manuscript may be subjected to changes, which could be reflected on the final version of the abstract too.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The structure of the manuscript is reasonable; however, it needs revision and proofreading. After the topic is introduced, different measurement principles are described. Here I propose a picture for each device (lack of resistance strain gauge 3d force sensor photographic documentation). Also, I propose to strengthen Chapter No.2 with advantages and disadvantages. Next, the elastomer is described. However, given the importance of such device, I do not see any critic opinions given by the authors. Indeed, I was expecting the authors to shed more light on the challenges related to the improvement of the device's sensitivity. Furthermore, it is correct to describe some applications for the sensors. However, I find the contents of Chapter 4 poorly described, from both the scientific and the practical (manufacturing) point of view. Before the conclusions are drawn, it is essential to better present the current status. Unfortunately, I believe very few information are given in Chapter 5 on the ongoing state of the art.</p>	
<p>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.</p>	<p>As pointed before, the manuscript is addressing an important topic and I strongly suggest its publication. However, before that, strong revision is needed. Overall, the manuscript does not provide enough adequate information for the reader to have a complete picture of the topic. The devices are described, yet criticism, challenges, advantages, disadvantages, and ongoing research information are lacking. I strongly suggest strengthening the manuscript with the above concepts. At the time of reading, I find many issues throughout the manuscript. Long sentences, incorrect use of punctuations and references. The format also needs revision. There are pictures with uncoherent font between the text and the caption. I suggest combining in one. Also, I propose to avoid the use of "and so on, ect..", they do not sound proper in a scientific manuscript. Please, refer to the additional file attached where I highlight all the issues of this type found in the body text.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =</p>	<p>At the time of reading, the manuscript still does not match the minimum criteria for publication in its bibliography and reference history. Many of the references lack proper formatting (see 2.1 for example). Also, the reading is critical in the bibliography. I had difficult time searching for some references.</p>	

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<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The use of English sounds correct however revision and proofreading are still suggested. There are improper long sentences and bad use of punctuations that need to be reviewed. Also, some concepts need to be rephrased as they are not clear.</p>	
<p>Optional/General comments</p>	<p>Overall, the manuscript aims at covering a very important research topic, and I strongly agree with the publication. However, a major revision is needed.</p> <p>Abstract:</p> <ul style="list-style-type: none"> • At the beginning, recall the complete name: three-dimensional force. I suggest finding one method to refer to the sensor. It might be 3D-force sensor, Three-dimensional force, or Three-Dimensional force sensor... Use one and be consistent throughout the manuscript. • “Finally” is generally introducing the last item of a list. Here, there is no list. As a result, I would substitute it with something more accurate. Unless, a list is properly given. • Usually, 5-6 keywords are given in the abstract. Here only four. Are one or two more needed? For example, I do not see the word <i>sensor</i>. <p>1:</p> <ul style="list-style-type: none"> • A sentence for more comprehension is needed when the authors state “The development of sensors has always affected [...]”. It is of difficult read. <p>2.1:</p> <ul style="list-style-type: none"> • Please, check the Man bok hong et al. reference. • In this paragraph, three-dimensional is in one case written in capital, in another with lower case letters. Please, use one and be consistent throughout the manuscript. <p>2.2:</p> <ul style="list-style-type: none"> • The construction in English does not sound correct with “lower two layers”. Please adjust. • The second sentence is too long. Please, break into different lines and rephrase. • Please, check the Ying Huang et al reference. • In general, I suggest avoiding the additional information after the reference. For example, “Hefei University of Technology”. It is unneeded because already provided by the reference itself. • The mechanism how the three-dimensional sensor can detect forces is unclear. Could you please provide additional information? • Please, check the formatting of the reference. Liang Guan hao seems different with the others. Again, I suggest avoiding the additional information (Zhejiang University). • Usually, after data are reported, the authors need to cope with adequate references. Where are the sensitivity levels coming from? If either a study or experimental campaign, please provide the reference. • Fig1 is blurry and not clear. I suggest improving the quality of the picture and to be consistent with the font (should be the same with the one used for the caption). <p>2.3:</p> <ul style="list-style-type: none"> • The first sentence is not clear. Please rephrase it. • The second sentence has wrong formatting. Also, please check the Pan Qi references. Please, avoid the additional information and stick to the important concept out of the study. • Please, check Liu et al. reference. • Same comment as for 2.2. I suggest improving the quality of the picture, and to be consistent with the font (see above). <p>3.1:</p> <ul style="list-style-type: none"> • Why is the manufacturing process of the elastomer easy? Please, provide more explanation. • References formatting are not consistent throughout the manuscript. • Always reference data when they are coming from either a study or an experimental campaign. • The combined structure design is not clear. Does it have any advantages or disadvantages? <p>3.2:</p> <ul style="list-style-type: none"> • “The integrated sensor elastomer is processed by removing a whole <i>material</i> [...]”. What is the material? • The first sentence is not clear. Please rephrase it. • References are not consistent throughout the manuscript. • Always reference data when they are coming from either a study or an experimental campaign. 	

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	<ul style="list-style-type: none"> The combined structure design is not clear. Does it have any advantages or disadvantages? Could you please provide more words on the design process? Why does it result to give the elastomer high accuracy, strong anti-lateral bias ability and object understanding coupling ability? “From the above” is not correct. The initial part of the paragraph is a small description of the elastomer, with no critical views by the authors on the main advantages. In this scenario, the reader does not have a clear idea if the main purpose of scholars’ research is to improve the sensibility of the elastomer. <p>4.1:</p> <ul style="list-style-type: none"> Please, always add the reference next to the data provided. The 6-DOF upper limb eskeleton is poorly described. Does it have any advantages? Is it a remarkable achievement if improved? <p>4.2:</p> <ul style="list-style-type: none"> The spacing of the paragraph is not consistent with the rest of the manuscript. Please, adjust it. The last is a very long sentence. Please, rephrase it as it currently sounds not easy to read. Please, always provide a critical view at the end of a paragraph where items have been either introduced or described. Does the device have any advantages/disadvantages? <p>4.3:</p> <ul style="list-style-type: none"> More data are needed. I suggest improving the paragraph as it is relevant. The applications of such device aim at showing its capabilities to measure forces, the easiness of use and the reliability. To highlight the importance of the research topic, I suggest strengthening this part of the manuscript. Check the punctuation. <p>5:</p> <ul style="list-style-type: none"> I did not capture any reference on any ongoing research on the force sensor device. 5.2 first sentence states: “The development of sensor intelligence is the focus of the current research. “ What research is mentioned? Please, describe and reference. This action is essential because it highlights the importance of the manuscript. <p>6:</p> <ul style="list-style-type: none"> Avoid etc. I believe the goal of the manuscript is to point out the importance of research in the field of measurement devices. As a result, it should emphasize it. Lack of any current research information. The conclusions need to be drawn on a more detailed manuscript. Lack of critical view by the authors. For example, why is the research important? What are the challenges behind? ... <p>References:</p> <ul style="list-style-type: none"> Please, check the bibliography style. It is inconsistent and it has errors in many parts. For example, [3]: “develop – ments” is not accurate in a scientific manuscript. Also, the authors sometimes are with capital letters, sometimes in lower case. In many occasions, avoid et al. because all the authors of a publication are listed. Hence, et al. is not needed. Unfortunately, I had some difficulties to find some references. Please, can you check the following and give a DOI? <ul style="list-style-type: none"> [4], [5], [6], [14], [15], [16], [17], [18], [19], [20]. 	
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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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Reviewer Details:

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