Response to reviewer #2

Dear Editors and Reviewers:

Thank you for your letter and for your comments concerning our manuscript entitled "A Posture Recognition Method Base on Indoor Positioning Technology". Manuscript id is sensors-432579. Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. The main corrections in the paper and the responds to the reviewer comments are as following:

Summary:

This paper presents a posture recognition method based on wearable tags on human body. It uses least square method and extended Kalman filter to achieve accurate recognition and positioning.

Due to the missing results and findings, my recommendation for this paper is a major revision.

Comments:

1. The English writing requires much improvement. There are many grammatical mistakes in the text (e.g. abstract). To name a few:

- L17: It is presented in the paper that a new [...] scheme.
- L25: it can derived
- L38: can mainly divided
- L67: it is proposed a new ... in the paper. --> This paper proposes a new... OR A new ... is proposed in this paper.

We are very sorry for our poor English, but we have re-written most sentences, words and expressions following the suggestions.

2. Jargons are being used before full introduction: e.g. UWB in abstract, TODA.

We are very sorry for our incorrect writing, we checked the full paper, and these abbreviation errors were corrected.

3. Where does this work stand with respect to the existing work and state-of-the-art? There is no comparison with state-of-the-art whatsoever. As authors mentioned, the posture recognition is a hot topic with growing research attention. There must be similar attempts to solve the same problem. What are the (dis-)advantages of proposed work compared to the existing ones?

We are very sorry for our unclear description in the introduction, and we have re-written the introduction. We have listed two categories methods for posture recognition, one is based on computer vision technology which has the advantage of high-precision and disadvantage of invasion of privacy. The other is based on sensors technology which

has the disadvantage of complex data processing steps, but their invasion of privacy are well tolerated (from Line 44 to line 47).

4. Authors mentioned that they implemented the algorithm on an STM32 microprocessor. However, the experimental results lack the details of evaluation on the hardware platform. I recommend the authors to add a subsection to the article, provide technical details of this microprocessor (cpu frequency, memory, ...), and report the performance of the algorithm on the platform. They can report the resource usage on the platform including execution time, code size, memory (if possible).

We are very sorry for our incorrect description. Our experiment in this paper is only in the stage of simulation, and algorithms transplanting work is our next step (described in section “Future work” from line 328 to line 339).

We are sorry for being unable to provide the report in the current.

5. The provided results are not picturing how well the algorithm performs in "posture recognition". They mainly include the deviation of angles. How these parameters can be translated to a more meaningful metric for the user? In other words, authors should clarify what is the final output of the application, and how close their calculation became to the golden output.

We are so sorry, but we see what you mean, if the experiments display various postures (such as walking, sitting, sleeping, crawling, calling, and falling down) and their recognition accuracy, it may be your expectations.

In this paper, the posture recognition method is based on indoor position technology, so we focused on calculating the positions, structure vectors and posture angles, and the deviation from the real values. This work is important for postures recognition. For example, if the deviation threshold of speed is less than a certain value, we can determine it is running, walking or standing.

The outputs of the application will be two import products: one is the indoor position umbrella which can provide location service, and the other is the special clothes with receiving tags which can recognize the postures of human body.