

Review Form 3

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_130306
Title of the Manuscript:	TEMPERATURE COMPENSATION OF LOW-COST SENSORS FOR ACCURATE TEMPERATURE MEASUREMENT
Type of the Article	

PART 1: 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>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	The research is valuable to precision irrigation where accurate temperature measurements are crucial for calculating evapotranspiration for ensuring efficient water usage and minimizing environmental impacts. The temperature sensors used for this purpose needs to be cost effective too. In this regard this research could benefit the scientific community especially integrating sensors for smart irrigation purposes.	Temperature compensation is the process where changes are made in the interfacing circuit or the software code written in microcontroller. So that temperature readings are obtained within close accuracy of reference temperature. Changes made in the interface circuit requires continuous calibration and by incorporating correction factor in code it is relatively easy to record accurate temperatures.
Is the title of the article suitable? (If not please suggest an alternative title)	The title could be modified to read : TEMPERATURE COMPENSATION OF LOW-COST SENSORS FOR ACCURATE TEMPERATURE MEASUREMENT IN IRRIGATION SYSTEMS	Thanks for the suggestion.
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.	The abstract is well written except that it is let down by the following: <ol style="list-style-type: none"> On line 6, the authors stated that <i>The study investigates the performance of three temperature humidity sensors</i> without indicating the objective/justification for this research and its benefits to the scientific community. On lines 16 and 17, the authors conclude the abstract by comparing LM35 with other methods. I expect LM35 to be compared with the DHT11, DHT22 sensors and not methods. Upon reading the introduction, the authors attempt to connect their work to irrigation and evapotranspiration but this is not reflected in the abstract. The authors could state a justification for their research based on irrigation and evapotranspiration for agricultural purposes especially in resource constraint countries. 	Thanks for the suggestion and the necessary suggestions are taken into account while revising the manuscript. As far as the comparison is concerned I have compared the 3 methods for three different sensors. First method is using the sensors without compensation, second method is by using correction factor which is embedded in software code in microcontroller. Third method is by adjusting the hardware components while designing of operational amplifier. Thus methods are compared and not the sensors.
Is the manuscript scientifically, correct? Please write here.	Yes. The authors follow a scientific approach to attempt to investigate temperature compensation in temperature humidity sensors to improve accuracy. The research method is clear enough for their study to be repeated by others. The results are adequately presented and discussed. Conclusions are drawn. The authors could improve their work by introducing system designs that takes into account how data is captured, processed and visualised for all the three methods. Moreover, the authors presented their research without comparing their work to what has been done by others (related work). I would encourage the authors to do benchmarking of their results	Thanks for the comments. The data has been collected for every 5 degrees rise in temperature and maintained in a data book and processed via excel. As far as the work by other authors concerned I have not found any literature that suggests temperature compensation done for such sensors. Valuable suggestions are taken into account.
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The authors are encouraged to include more recent references such as from ACM, IEEE, Elsevier etc within the past three to five years.	Valuable suggestions will be incorporated.

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Is the language/English quality of the article suitable for scholarly communications?	The authors are encouraged to subject the paper to thorough language editing. I have highlighted a few language errors in the manuscript.	Thanks for the review and the comments, modifications will be done.
Optional/General comments	The authors should connect the abstract to the rest of the manuscript to justify the essence of the research. A little bit of the aim/importance of the research should be highlighted in the abstract. PLEASE SEE ATTACHMENT	Suggestions will be considered

PART 2:

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