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Journal Name:	<u>British Journal of Mathematics & Computer Science</u>
Manuscript Number:	Ms_BJMCS_32543
Title of the Manuscript:	Analytical modeling of the Thermoelectric Effect in Photovoltaic Cells: Combined Solar Photovoltaic and Thermoelectric Generator System (PV+TEG)
Type of the Article	Theoretical study

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	“an increasing of the photon generation rate and the photocurrent density, when the temperature increases” is obvious result by default and follows from the operational principle of the module. It is not result achieved due to the study conducted. It is not clear how did you conclude that the series resistance is decreased, how it follows from the results? In “Materials and methods” section it is not clear are both modules connected to the common load. It seems that the connection is parallel if the claim is for R_s reduction, but then only the currents can be summed through the load, not the electrical power (which involves voltage, but the voltage cannot be summed at parallel resistance connection). There is no verification of the model proposed by experiments with the commercially available modules. Thus the model description is unconfirmed. How the hot side will be cooled practically down to the temperature announced –it is important for the model verification and the real application of the approach proposed.	Dear Reviewers we thank to you for your valuable remarks and suggestions for improving the quality of this manuscript. We think that all the suggestions have been taken into account in the revised manuscript. Our salient results found here have been also restored. As you know, the modules are connected in parallel in order to reduce the series resistance R_s, which allows a long intrinsic lifetime of the photovoltaic device (PV). Yes very good, only the currents can be summed through the load, not the electrical power (which involves voltage, but the voltage cannot be summed at parallel resistance connection). It is the aim of this study. We think that the model described here is well confirmed. See reference [27] for more understanding Allows cooling the photovoltaic cells (PV), which avoids the loss of electrical efficiency observed in the devices. Our overall objective is to generate the maximum electrical current at the



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	Basic reference source used is [2], but it is hard to differentiate what is taken from [2] as a base and what the authors contribution is.	thermodynamic temperature and low cost. From where, the use of combined systems (PV+TEG). This part is corrected and reformulated as you can notice in the revised manuscript.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		