



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2015_BJMCS_18555
Title of the Manuscript:	Design, Optimization and Fabrication of a Climbing Six Articulated-Wheeled Robot using Artificial Evolution and 3D Printing
Type of the Article	Original Research Article

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.

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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)
Compulsory REVISION comments	In order to design and optimize the morphology of a Six Articulated Wheeled Robot (SAWR) with climbing ability, the Single Objective Evolutionary Algorithm (SOEA) and Multi Objective Evolutionary Algorithm (MOEA) are proposed and validated in simulation and real world. The SAWR robot was fabricated using a 3D printing technology to perform climbing motion in real world environment. It was easy to follow the ideas described in the paper. Also, the structure was very well defined with good figures used to help the readers to understand the content. Please, consider the following suggestions: a) The introduction should provide a clear idea of the work. Thus, the following items should be address: 1) What are the motivations to study the proposed idea? 2) A brief description of the problem with its importance, relevance and justification should be considered. 3) Why it is important to study the topic? 4) What is the most closely related work by others and how does this work differ?	a) 1, 2, 3 are already described in page 2, paragraph 3 and 4. a) 4 added with highlight in last paragraph of page 2. a) 5 already described in second last paragraph of introduction. a) 6 and 7 has been added with highlight in second last paragraph of introduction. a) 8 has been added (last paragraph of Introduction) b) has been added in section 2.3.3. c) has been added in section 3.1. d) information about figure 9 has been best described in table 3. e) has been added in last paragraph of section 2.1. f) has been revised as mentioned.



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	5) What is the methodology utilized? Which technology you used? For example, the 3D printing technology, the SOEA and MOEA evolutionary algorithms, among others; 6) Contributions: What is the original contribution of this work? Why should this contribution be considered important? What is the most closely related work by others and how does this work differ? 7) How can other researchers make use of the results of this work? 8) In the last paragraph it is important to make a brief description of what the readers will read in each section of the paper.	
	b) Subsection 2.1 (line 99): what kind of sensor you used in the robot? Distance, infrared sensors? c) Subsection 3.1: the authors used a V-REP, Webots, Gazebo platforms or they programming a simulation environment? Which programming language? JAVA, C++, etc? It is better to describe more details about the steps utilized to find the simulation results; d) Subsection 3.2.1 (lines 384-385): it is better to write in the text more details related to Figure 9; e) Subsection 3.3: it seems that the SAWR is not controlled using an intelligent control. For example, PID, Neural Network or other intelligent algorithms. Thus, it is important to write more details about it in this section. Also, some	



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	information about the hardware specifications (microcontroller, sensors, etc). f) Some meaningless sentences: 1) Line 212: "... Equation 2, 3 and 4." change to "... Equations 2, 3 and 4."	
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		