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#### **SDI Review Form 1.6**

Journal Name:	Advances in Research
Manuscript Number:	2014_AIR_14195
Title of the Manuscript:	Two Approaches for Solving Non-Linear Bi-level Programming problem
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	<b>Author's comment</b> (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	In this paper, the nonlinear bi-level optimization problem is reformulated as a standard optimization problem (6) by using the KKT conditions and smoothing functions. The reviewer has two major concerns regarding the proposed method. 1. In the HA method, the one-dimensional search is used to solve (6), which can be solved by many existing methods, such as the interior point method. Does the proposed HA method outperform existing methods when the problem involves more decision variables? 2. In the TA method, problem (6) is approximated by its linearized version (15) in each iteration. The feasibility of t <sup>1</sup> is guaranteed in step 1. The problem is, the optimal solution t <sup>k</sup> in step k is quite unlikely to be a feasible solution of the original problem (6), because H and G are equality constraints. Does the TA method have a theoretical guarantee that it must converge to a (local) optimal solution of problem (6)?	
Minor REVISION comments		
<b>Optional/General</b> comments		

### **Reviewer Details:**

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