Review Form 1.7

Journal Name:	**Journal of Engineering Research and Reports**
Manuscript Number:	**Ms_JERR_110430**
Title of the Manuscript:	**On Boolean Satisfiability**
Type of the Article	

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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 **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1. Yes. The problem of satisfiability and its efficient computation is of fundamental importance to computational science.** **2. The title is suitable.** **3. Abstract may be slightly more descriptive of the actual contribution. Hence it is not very comprehensive at present.** **4. Subsections are appropriate.** **5. Result on resolution, Theorem 2, used in deriving the general algorithm is correct. Authors say that they haven't found any reference. But since theory of resolution is quite dated in SAT literature such specific tricks become obscure. I cannot say whether the general claim of section 3.2 in answering satisfiability of a formula is correct. The authors need to write rigorous pseudocode and give a proof of its correctness.** **6. References appear to be too general not closely related to the subject matter of the contribution. Does the paper want to revive the resolution approach to SAT? Why was resolution discarded after DPLL?** **In general I find that for general SAT problem the algorithm is not clearly written in the paper. Authors must very clearly state the pseudocode of the algorithm with each step explained without any ambiguity. The method applies to 2 SAT. But for general SAT it will require a formal proof. Nevertheless the resolution identity observed in the paper is quite interesting. Authors should also show by actual computation of SAT case studies how their algorithm performs relative to an open source DPLL implementation.**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	Yes	
Optional/General comments	Not sufficiently developed as a research paper. No clear contribution of an algorithm or a theorem of general nature claimed or theorem proved beyond 2 SAT. Application to general SAT needs proof. The algorithm for general SAT is unclear. If the methods for determining satisfiability are new then an appropriate claim must be made and if the contribution is an improvement, then appropriate reference over which improvement is carried out must be pointed out. Finally I would like the authors to clarify how this algorithm will be different from the old resolution based SAT algorithm which I think was proposed by Davis and Putnam and later modified by Loveland and Logeman. Authors should also give computational performance of the algorithm for general SAT case studies.	

PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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