



SDI Review Form 1.6

Journal Name:	Journal of Advances in Mathematics and Computer Science
Manuscript Number:	Ms_JAMCS_39285
Title of the Manuscript:	Design of a Digital Circuit for Integer Factorization via Solving the Inverse Problem of Logic
Type of the 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. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

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	This well written paper concerns integer factorization in Calculus of Propositions. A toy problem of 4 bits only is manually solved. The automation of the solution is pointed out, so that it might be applied in the design of larger factorization circuits. The features of Boolean Function Synthesis and Boolean Equation Solving are compared in Table 1. Listing the properties of Boolean Algebra in 2.1 and 2.2 up to page 7 is redundant. They are well known and trivial. In 2.4 it is explained why in Big Boolean Algebra some properties of B2 are not valid. The integer factorization problem to be solved is described in Section 3 The factorization of $YZ=X$ by estimating how each variable of Y and Z can be expressed as a function of the X elements is used as a case study with sizes for X, Y, Z: 4, 3, 2 respectively. Karnaugh maps are used to show how the values of the X elements can be used to derive Y and Z elements. What is not made very clear is the scaling of the problem i.e., what steps can be followed to solve a different problem (with different X, Y, Z sizes. It would be very helpful to include such a step by step description.	
Minor REVISION comments	In pg 11 "variables" → variables In Fig. 2 it is better to use subfigure numbering.	
Optional/General comments		

Reviewer Details:

Name:	Nikos Petrellis
Department, University & Country	Computer Science and Engineering Dept., Technological Educational Institute of Thessaly, Greece