



SDI Review Form 1.6

Journal Name:	Journal of Advances in Mathematics and Computer Science
Manuscript Number:	Ms_JAMCS_45969
Title of the Manuscript:	Compounding Commuting Matrices
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		
Minor REVISION comments	Although matrices (as arrays) existed much earlier, matrix algebra originated with Arthur Cayley [1] in 1858 and was developed further by many others. As noted by Cayley, in general two matrices A and B do not commute, i.e. $AB \neq BA$. However, certain special families of matrices do commute e.g. circulant matrices. Other families of commuting matrices are constructed in the present paper together with their Jordan form and singular value decomposition. We utilize the method of sequential compounding which has a long history as discussed by Rogers, et.al. [6] and used by them in constructions of magic squares and Latin squares. The Kronecker product, denoted by $\otimes$ and its associated identities (see Meyer [4]) is employed in our construction. All matrices in the present paper are square. It seems the results are new and original. I recommend the paper for possible publication after adopting the following points: 1). What are the advantages of the results, discuss in detail. 2). Some comparative study should be included.	In the Introduction, I added a discussion of advantages of compounded matrices over circulant matrices. I do not know of any other families of commuting matrices to compare with. After equation (5), I noted that circulant matrices do not compound to a circulant matrix I added Example 3 - an order-4 circulant matrix for comparison.
Optional/General comments		



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?	<u>(If yes, Kindly please write down the ethical issues here in details)</u>	