



SDI Review Form 1.6

Journal Name:	Journal of Advances in Mathematics and Computer Science
Manuscript Number:	Ms_JAMCS_39632
Title of the Manuscript:	Conservation properties of the Trapezoidal rule for Linear Transient Electromagnetics
Type of the Article	Original Research Paper

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)
<u>Compulsory</u> REVISION comments	1. All numerical results presented in this manuscript were obtained using the time-stepping strategy. No comparison (in the Figures) is made between the time-stepping strategies with say the trapezoidal rule. How then did you judge (as presented in your abstract) that the time-stepping strategy <i>mimics these continuum conservation properties either exactly or to a very good approximation?</i> 2. In Fig. 10, please clarify that the <i>Fine</i> and <i>Coarse</i> mesh result was obtained using the time-stepping strategy compared with the method Jioa? If yes, is Jioa a numerical method? I guess not. It is a reference, as such, the numerical method used in the reference should be used as the legend and not Jioa. 3. Under the sub-section 2.2 (Variational and FEM formulations), the time stepping equations are (2.21) and (2.22). Under the sub-section 2.3, it is (2.31a). Shouldn't there be a time-stepping equation for the sub-section 2.4 (Scattering from conducting and dielectric bodies)?	Our method is a slight variation of the trapezoidal rule (also reflected in the title of our paper). Our main contribution is in deriving the continuum conservation properties, and showing that our proposed numerical scheme conserves these properties even at a numerical level. We have compared the results obtained by our strategy with analytical solutions (See Figures 1 and 3). Also, Rfigures 2, 4 and 5 show that our time stepping strategy mimics the continuum conservation properties either exactly or upto a very good approximation. 1. We want to thank the reviewer for pointing out this mistake. We have changed all the legends from `Author name' to `Numerical method' name. 2. We have followed the same time stepping strategy given in Section 2.2 in Section 2.4. We have mentioned this in the manuscript now.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	Consider making time-Stepping Strategy a sub-section on its own under Section 2 . This is the crux of your study! A little description of the substitutions involved with (2.21) and (2.22) in (2.41) will do good.	We have carried out this change.