|  |  |
| --- | --- |
|  | |
| Journal Name: | [**Journal of Engineering Research and Reports**](https://journaljerr.com/index.php/JERR) |
| Manuscript Number: | **Ms\_JERR\_136570** |
| Title of the Manuscript: | **Extension of Graph Signal Processing, Electric Circuits, and Bond Graphs Using Hypergraphs and Superhypergraphs** |
| Type of the Article | **Original Research Article** |

|  |  |  |
| --- | --- | --- |
| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This manuscript introduces a fresh and important extension to well-established frameworks in both engineering and applied mathematics by incorporating hypergraphs and superhypergraphs. By broadening the traditional graph model, this approach allows for the representation of complex, hierarchical, and multi-dimensional relationships that naturally appear in fields like Graph Signal Processing, Electric Circuits, and Bond Graphs. This expanded modeling framework not only adds flexibility but also enhances precision, paving the way for more accurate analysis and innovative solutions in these areas. The paper provides solid theoretical foundations that could lead to the development of new computational techniques and practical applications, creating stronger connections between mathematical theory and real-world engineering problems. | Thank you very much for your good comments. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Title is clear and informative, but it could be improved for conciseness and impact. Alternate title : Modeling Hierarchical Systems in Graph Signal Processing, Electric Circuits, and Bond Graphs via Hypergraphs and Superhypergraphs | Thank you very much for your good comments. I modified it. |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | Clarify the motivation – Clearly state why traditional graphs are insufficient for modeling certain systems.  Specify contributions – Highlight whether new models, theoretical results, or algorithms are introduced.  Include key results or examples – Briefly mention illustrative applications, case studies, or findings if available. | Thank you very much for your valuable comments.As you pointed out, I have added a clarification regarding the motivation of this paper.I have also revised the description of the contributions to improve the overall readability of the manuscript.In addition, several concrete examples have been newly included in the paper. |
| Is the manuscript scientifically, correct? Please write here. | The manuscript appears to be scientifically correct in principle | Thank you very much for your good comments. |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Listed references are enough. | Thank you very much for your good comments. |
| Is the language/English quality of the article suitable for scholarly communications? | Suitable but would benefit from polishing if required. | Thank you very much for your good comments. |
| Optional/General comments | The contribution is valuable and relevant, and with minor revisions, the manuscript would be well-suited for publication in a scholarly journal focused on applied mathematics, systems theory, or engineering. | Thank you very much for your good comments. |

|  |  |  |
| --- | --- | --- |
| **PART 2:** | | |
|  | Reviewer’s comment | **Author’s Feedback** (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 detail)* | Thank you very much for your good comments. |