

# Siberian Electronic Mathematical Reports

## REFEREE REVIEW

PAPER: *Enumeration of strictly Deza graphs with at most 21 vertices*  
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The manuscript is devoted to enumerating strictly Deza graphs defined as Deza graphs of diameter 2 that are not strongly regular graphs. Deza graphs are a generalisation of strongly regular graphs. They were introduced in 1999. Since that time many interesting results were obtained for Deza graphs. One of the directions in studying these graphs is enumeration of graphs with a given number of vertices.

In this manuscript all strictly Deza graphs up to 21 vertices were obtained. The authors describe a method for enumerating the graphs and present computational results along with giving some properties of discovered graphs.

It seems that the manuscript could be useful for other researchers. However, it has some principal problems presented below.

1. Despite of the manuscript is written good enough, a style of presenting results does not give a clear understanding about the main goal of the manuscript. Is it just to enumerate the graphs as it is stated in the abstract? If yes, then why there is Section 3 in the manuscript giving overview of some known constructions and properties of Deza graphs? More explanations about the main goals of the manuscript could help readers to catch the matter.

2. In Section 2 an enumeration algorithm is presented. Is it an exhaustive algorithm? Why? Give more explanations.

3. Another problem is with Section 3 where too many results from other papers are presented. I am not sure that it is a good idea to give statements of four theorems in Subsection 3.3. It would be enough to refer to the corresponding papers and Theorems instead of showing them. The same thing goes to almost all constructions from Section 3. One can put a reference to the corresponding paper in the Table containing computational results in Section 4. It will be more than enough.

4. The Tables: it is a good style if a table has a title with numbering; in this case it is easy to refer to the corresponding table in the text.

5. The manuscript has Section 4 on Deza graphs with WL-rank 4. Why it is so important for this manuscript (the main goal of which is just to enumerate graphs!) to consider WL-ranks?! It is unclear. Do the authors pretend to present new theoretical results? No.

Having the listed problems, nevertheless I think the authors could try to reorganize the manuscript with respect to the above comments. It might be a short note containing computational results with describing an enumeration algorithm, emphasizing on its finiteness and exhaustiveness, with tabulating obtained results and pointing out their properties by referring to corresponding sources. Since Deza graphs become more and more popular for studying their properties such a note will be useful and cited.