Scientific Journal of Impact Factor(SJIF): 3.134

e-ISSN(O): 2348-4470
p-ISSN(P): 2348-6406

International Journal of Advance Engineering and Research Development

Volume 2, Issue 4, April -2015

Review of the research paper related to graph labelling associated with Fibonacci numbers

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Review of a Research Paper entitled "Fibonacci divisor cordial graphs"

Concise Summary:

Authors: R. Sridevi, K. Nagarajan, A. Nellaimurugan, S. Navanaeethakrishnan

Published in: International Journal of Mathematics and Soft Computing, Vol.3, No.3 (2013), 33 - 39. ISSN Print : 2249 – 3328, ISSN Online: 2319 – 5215.

This paper includes the results on Fibonacci divisor cordial labelling. The authorss proved that the graphs $P_n, C_n, K_{2,n} \mathcal{O} u_2(K_1), < B_{n,n} : w >$ are Fibonacci divisor cordial. Further they prove that complete graph K_n is not Fibonacci divisor cordial graph.

Evaluation of Paper:

I. Positive Sides:

(1) The Language that is used in this paper is easy to understand.
(2) Enough number of examples are provided to understand each concept of the paper.
(3) Fibonacci numbers are very useful and authors have associated these with a special graph labeling technique which builds a bridge between number theory and graph theory.

II. Negative Sides:

(1) The authors are not seemed to be focused on notation concern. For instance, in Example 2.13 Fibonacci cordial labeling of the graph $<B_{7,7} : w>$ is shown but in the caption the notation $B_{7,7}$ is used which is required to be modified.
(2) In same example 2.13 the notation F_2 should be replaced by F_6.
(3) In fig.6 vertices F_6 and F_{11} are coinciding. C_{14} and C_{11} could have been drawn with some space between them. The authors should be careful while drawing figures.

III. Unclear Points:

This paper discuss only about path, cycle, complete graph and bistar graph but nothing has been mentioned about when is it possible for any graph to be Fibonacci divisor cordial graph .Something regarding this property of the general graph could have been considered.

Further Comments:

(1) The results can be extended to more generalized families of graphs like trees, complete bipartite graphs etc.
(2) Some characterization results in the context of Fibonacci divisor cordial graphs may be found.

Review of a Research Paper entitled "An Algorithm for Fibonacci Labeling of a Tree''

Concise Summary:

Authors: R. Vikrama Prasad, S.Sivasubramaniam.
Published in: International Journal of Innovative Science, Engineering & Technology, Vol. 1 Issue 8, October 2014.

In this paper the authors have discussed some results regarding the gracefulness and Fibonacci gracefulness of tree.

Evaluation of Paper:

I. Positive Sides:

(1) The authors have used easy language to understand the proofs of the results.

(2) "*Trees are graceful*" is a very famous conjecture given by Ringel and Kotzig. The authors have tried to work in the direction of this conjecture which is appreciated.

(3) The authors have given an algorithm for the trees to be Fibonacci graceful this algorithm provides better understanding labelling.

II. Negative Sides:

The result on "*Trees are Fibonacci graceful*" has been already proved by S.K.Vaidya and P.L.Vihol in the paper published in Studies in mathematical sciences vol.2 no.2 in 2011. It seems to be a duplication of the same research work.

III. Unclear Points:

The authors have mentioned about the gracefulness of trees but relevant content/reference is missing.

Further Comments:

(1) Some more results about the Fibonacci graceful labeling of graphs could have been discussed.
(2) The authors should be careful about the existing results.

Review of a Research Paper entitled "Super Fibonacci Graceful Labeling"

Concise Summary:

Authors: R. Sridevi, S.Navaneethakrishnan, K.Nagarajan.

Published in: International Journal Mathematical Combinatorics, Vol.3 (2010), 22-40.

In this paper, the author have constructed new types of graphs namely $F_n \oplus K^{+}_{1,m}$, $C_n \oplus P_m$, $K_{1,n} \oslash K_{1,2}$, $F_n \oplus P_m$ and $C_n \oplus K_{1,m}$ and they have also proved that these graphs are super Fibonacci graceful graphs.

Evaluation of Paper:

(I) Positive Sides:

(1) The authors have constructed new graphs and also proved some interesting results about these graphs.
(2) The authors have proved the results making sure that it is accessible to the reader.
(3) The authors have mentioned the definitions just before the concerned theorems.
(4) The authors have mentioned the labels of definitions and theorem in bold fonts.

(II) Negative Sides:

The authors should have shortened the proofs of the theorem.

(III) Unclear Points: It seems that authors have introduced a new operation with symbol '$\oslash$'. But this operation is been used for a specific graph family. Whether this operation can be considered for any two graphs G and H is an unclear point.

Further Comments:

(1) The authors should be careful about the notations and symbols.
(2) Applications should have been given.

(3) Further scope of his study in Fibonacci graceful labeling could have been discussed.
(4) The authors should have discussed about super Fibonacci graceful labeling property of F_n, $K_{1,m}$, C_n, P_m.

