Editorial

Mapana – Journal of Sciences is in the eleventh year of publication. This issue (No. 4) and the issue (No. 3) are dedicated to the International Conference on Emerging Trends in Fluid Mechanics and Graph Theory organized by the Department of Mathematics, Christ University during 16-18 August 2012.

The first article by Deepa Sinha and Ayushi Dhama deals with the sign-compatibility of some derived signed graphs. The authors have paid attention to finite, undirected graphs with no loops or multiple edges.

Nasreen Khan et al have investigated the problem of L(2, 1)-labelling of cactus graphs. An estimate for the degree of a cactus graph is obtained in terms of the L(2, 1)-labelling number. An optimal algorithm is also presented here to label the vertices of cactus graph using the L(2, 1)-labelling technique.

The article by T N Janakiraman and M Poobalaranjani is concerned with the comparison on the bounds of chromatic preserving number and dom-chromatic number of Cartesian product and Kronecker product of paths. The behaviour of the cp-number and dc-number and their bounds for product of paths is discussed.

Aditya Shastry and Nidhi Khandelwal have carried out an analysis to find some bounds for antibandwidth using invariants of graphs. They have also figured out upper bounds using the interior and exterior boundaries.

The article "Mitigating Black Hole Attacks in AODV Routing Protocol Using Dynamic Graph" by Arunangshu Pal et al explains the AODV routing technique and the black hole attack. An efficient way of representing Mobile Ad hoc NETwork (MANET) by dynamic graph is brought out. It then extends the idea of dynamic graph to propose a technique to solve the problem of black hole attack in AODV.

J Gerard Rozario et al examined the sum labelling for some star and cycle related special graphs. The authors obtained optimal sum labeling scheme for some star and cycle related special graphs.

G Mahadevan et al studied the graphs whose sum of global connected domination number and chromatic number is 2n-5. The characterization of these classes of graphs and the corresponding extremal graphs are explicated.

The article by V Manjula focuses on the ideas and application of network flows in graph theory. The concepts and terminology of network flows are presented with graphical representations.

K Murugan and A Subramanian introduce the concept of skolem difference mean labelling in graphs and bring out some very important results.

In the last article of this issue, R Mary Jeya Jothi and A Amutha analyze the characterization of super strongly perfect graphs in chordal and strongly chordal graphs. The authors pointed out the characterization of super strongly perfect graphs using odd cycles and the relationship between diameter, domination and co-domination numbers of chordal graphs.

We thank all the authors and reviewers for their cooperation and support. We look forward to receiving your feedback on the articles brought out in this issue.

Joseph Varghese