



## Editorial

Joseph Fourier's exposition of sine and cosine curves had outstanding impact on various aspects of theoretical and applicable aspects of Mathematics especially in the theory of communications. In the 20th century, Wavelet Theory made a much deeper dive into the analysis data with the help of mathematical functions. Information science owes much to the contributions of Yves Meyer for his contributions to the progress of Wavelet Theory. Meyer is the 2017 Abel laureate. His algorithm to decompose images helped reconstruct the finger prints which helps crime detection in a greater level. Mayer has worked in all areas of Mathematics: theoretical or application, continuous or discrete. He is a synthesizer and integrator.

This issue of *Mapana* brings to you a collection five articles from three different areas of Mathematics. Three articles are from Graph Theory and one each are from Theoretical Computer Science and Fluid Mechanics.

In the first article, Patil and Raja give an exposition on Path (or cycle)-trees with Graph Equations involving Line and Split Graphs. In this paper, the characterizations and properties of both  $P_k$ -trees for  $k \geq 4$  and  $C_n$ -trees for  $n \geq 5$  and their Hamiltonian property, domination, planarity, chromatic and b-chromatic numbers are established.

A steady flow of an electrically conducting dusty viscous fluid over a permeable stretching sheet with all effect and suction/blowing has been investigated by B Mahanthesh in the next article.

Sethu Ramalingam, Keerthi Asir and Athisayanathan discuss about the upper vertex triangle free detour number of a graph in the next paper. The x-triangle free detour set, the x-triangle free detour number, the minimal x-triangle free detour set and the upper x-triangle free detour number are defined and studied.

In the fourth paper, Sunoj and Mathew Varkey define the hexagonal difference prime labeling of some path graphs. In the last paper, Ann Susa Thomas focuses on how cell work languages

can be captured by collage grammar in ETOL and part sensitive modes.

We thank all the contributors for their willingness in complying with the review process and timeliness. Our appreciations go to all the reviewers who have taken painstaking efforts to go through the articles that are published and not published. Hope the readers will find enough materials in this issue in their quest for knowledge.

**Joseph Varghese**  
**Issue Editor**