**Paper No: PU-SOE-MAT- 18**

**Chemical Reaction Driven Ferroconvection in a Porous Medium**

Nisha Mary Thomas and **S Maruthamanikandan**

Department of Mathematics, School of Engineering, Presidency University, Bangalore-560 064, INDIA

**Abstract**

A total coloring of a graph G is a combination of vertex and edge colorings of G. In other words, is an assignment of colors to the elements of the graph G such that no two adjacent elements (vertices and edges) receive a same color. The total chromatic number of a graph G, denoted by χ 00(G), is the minimum number of colors that suffice in a total coloring. Total coloring conjecture (TCC) was proposed independently by Behzad and Vizing that for any graph G, ∆(G) + 1 ≤ χ 00(G) ≤ ∆(G) + 2, where ∆(G) is the maximum degree of G. In this paper, we prove TCC for Core Satellite graph, Cocktail Party graph, Modular product of paths and Shrikhande graph.

**Keywords:**

Total coloring, Modular product graph, Core Satellite graph, Cocktail Party graph, Shrikhande graph.

**Publication Details:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Journal Name** | **Vol.** | **Month & Year** | **Page No.** | **Publisher** | **Scimago Ranking** |
| Advance in Fluid Dynamics | 10(3) | July, 2020 | 363-371 | Springer, Singapore |  |