National Institute of Technology Rourkela

Departmental Seminar

Seminar Title : Laplacian State Transfer on Double Subdivided Stars

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Venue : Seminar Room, Department of Mathematics

Date and Time : 24 Jun 2025 (11.00AM)

Abstract : Let G be a finite, simple, and undirected graph with the Laplacian matrix L. We study the continuous-time quantum walk

on G, governed by the transition matrix UL(t) = eitL, where $t \in R$. In this work, we explore Laplacian state transfer on a double subdivided star Tm,m, constructed by connecting the coalescence vertices of two copies of a subdivided star SK1,m, with an additional edge. We present a complete characterisation for the existence of Laplacian pretty good state transfer and Laplacian pretty good pair state transfer in Tm,m. Furthermore, we demonstrate that an edge perturbation in

Tm,m yields infinitely many bicyclic graphs that exhibit Laplacian perfect pair state transfer.