

STABILIZATION OF A GENERALIZED TELEGRAPH EQUATION ON STAR SHAPED NETWORKS

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ABSTRACT. The purpose of this talk is to investigate the stabilization of a generalized telegraph equation set on one dimensional star shaped networks. A dissipative boundary condition is applied at all the external vertices. At the common internal vertex, an improved Kirchhoff law is considered. First, we prove that our system is strongly stable. Next, using a frequency domain approach, we show that the energy of the system decays exponentially to zero.