

1154-93-2718

**Hasala Gallolu Kankanamalage\*** (hgallolu@rwu.edu). *Lyapunov Characterizations of String Stability of Interconnected Systems with Delays.*

String Stability plays a significant role in the design of adaptive cruise control systems. This notion provides an important safety measure of the longitudinal dynamics of automobile platoons. Even though string stability has a rich literature in adaptive control design, string stability of interconnected systems with delays needs careful consideration. In this work, we present a Lyapunov-Krasovskii characterization of String Stability. We will extend this characterization to applications of the safety of automobile platoons. We further provide an idea of the practical importance of the adaptive control design process. (Received September 17, 2019)