

Meeting: 1004, Bowling Green, Kentucky, SS 3A, Special Session on Dynamic Equations on Time Scales and Applications

1004-34-244 **Gro Hovhannisyan*** (ghovhannisyan@stark.kent.edu), 4486 South Blvd NW Apt 4, Canton, OH 44718. *Asymptotic Stability for Second-Order Differential Equations.*

We prove asymptotical stability and instability results for a general second-order differential equations with complex-valued functions as coefficients. To prove asymptotic stability of linear second-order differential equations, we use representations of solutions via WKB asymptotic solutions and error estimates. For nonlinear second-order differential equations, we extend the asymptotic stability theorem of Pucci and Serrin to the case of complex-valued coefficients. (Received January 25, 2005)