

Lyapunov stability

Abbas:

In automatic control engineering, the notion of Lyapunov stability is widely used. It can be used to make a dynamical system follows a desired trajectory. Many industrial, aerial, aerospace, robotic and biological processes are automated based on the Lyapunov theory.

As the goal of the project is to apply mathematics to real systems, this section is to introduce what exactly Lyapunov theory is (from a mathematical point of view), and how it can be applied to real applications?