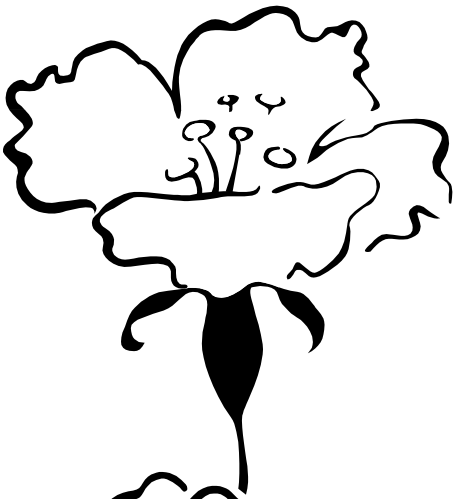

EE 505
Nonlinear System Theory

Topics:

- Examples of nonlinear phenomena
- Second order systems
- Solutions for nonlinear differential equations
- Lyapunov stability
- Input-Output stability
- Advanced stability theory
- Applications of Lyapunov stability
- Periodic orbits
- Perturbations and averaging
- Singular perturbations theory
- Differential-Geometric methods
- Exact feedback linearization
- Lyapunov-based design
- Bifurcations and complex behavior

Text:

Khalil, Hassan K., Nonlinear Systems, 3rd ed., Prentice Hall, 2001

Reference:

Vidyasagar, M., Nonlinear Systems Analysis, 2nd ed., Prentice Hall, 1993

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