

ECE 330 HW #10

No in class quiz.

Copies of the textbook are kept at the Grainger Engineering Library Reserve

Text problem 5.1

Special problem #1 (see solution Spring 2004 final)

A dynamic system is modeled as:

$$\begin{aligned}\dot{x}_1 &= -3x_1 + 2x_2 \\ \dot{x}_2 &= x_1^2 - 2x_2 + 2\end{aligned}$$

- Find all equilibrium points.
- Linearize the system at each equilibrium point.
- Determine the eigenvalues at each equilibrium point. Determine which points are stable and which are unstable.