

University of Kurdistan

# **Robust Control**

## (Fall 2018)

#### Department of Electrical & Computer Engineering

## Instructor: H. Bevrani

## **OUTLINE**

- 1. An Introduction on Robust Control
- 2. New Modeling Concepts and Linear Algebra
- **3.** Uncertainty and Modeling
- 4. Kharitonov Approach
- **5.** H<sub>2</sub> and H $\infty$  Control Approaches
- **6.**  $\mu$  and  $\mu$  Synthesis
- 7. LMI-based Robust Control and Optimization

#### **GRADING**

- Homework and Activities: 15%
- Presentation a Recent Work 15%
- Written Exam: 35%
- Project 35%

#### **REFERENCE**

- [1] K. Zhou, Essentials of Robust Control, Prentice Hall, 1999.
- [2] K-Z. Liu, Y. Yao, Robust Control: Theory and Applications, Wiley, 2016.
- [3] M. Fathi, H. Bevrani, **Optimization in Electrical Engineering**, Springer, Expected 2019.
- [4] H. Bevrani, Course Lecture Notes, Fall 2016.