Spring 2013
GE 525 (CRN: 50871; Credit: 4 hours)
Control of Complex Systems

Time: 2:00 pm - 4:50 pm on Wednesdays; Place: 106B6 Engineering Hall.

Instructor: Dušan M. Stipanović
Office hours: Wednesdays: 11am-noon in 312 Transportation Building (TB),
and by appointment.
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Weekly Topics

January 16	Liapunov (or Lyapunov) Stability
January 23	Optimal Control and Control Liapunov Functions
January 30	Vector Liapunov Functions and Decentralized Control
February 6	Decentralized Overlapping Control
February 13	Decentralized Optimal Control
February 20	Introduction to Multi-Player Differential Games
February 27	Decentralized Control and Multi-Player Differential Games
March 6	Decentralized Optimal Control and Differential Games
March 13	Liapunov-like Functions and Differential Games
March 20	Spring Break
March 27	Multi-objective and Decentralized Optimization
April 3	Applications and Examples
April 10	Applications and Examples
April 17	Project Discussion
April 24	Project Discussion
May 1	Project Discussions

Grading

The final grade will be based on the project grade. There will be not more than three sets of homework problems for extra credit only.

Recommended textbook: *"Decentralized Control of Complex Systems"* by Dragoslav D. Šiljak, Academic Press, 1991. This book is out of print but the copies will be available for the students in the class (courtesy of the author who owns the copyrights). All other course material such as notes and research papers will be provided too.