IE 598
Distributed Decision Systems

TR 5:00 pm-6:20 pm
Online Lectures via Zoom

Instructor: **Rasoul Etesami** *(etesami1@illinois.edu)*
Office Hours, 4:00 pm-5:30 pm Fridays via Zoom.

Related Texts: *Convergence Rate of Distributed Averaging Dynamics and Optimization in Networks* by A. Nedić
Markov Chains and Mixing Times by D. A. Levin and Y. Peres
Distributed Control of Robotic Networks by F. Bullo, J. Cortes, S. Martinez

TENTATIVE COURSE OUTLINE:

Topics	Lectures
Models for Distributed Decision Algorithms	Weeks 1
Consensus and Gossip Algorithms	Weeks 2-3
Markov Chains and Random Walks	Weeks 4-5
Epidemics and Diffusion Dynamics	Weeks 6
Opinion Dynamics over Social Networks	Week 7
Distributed Optimization Algorithms	Week 8-9
Network Games	Weeks 10-11
Final Presentations	Weeks 12-end

Assignments:

- There will be 4 homework assignments which will be posted on every-three-week basis.
- Homework assignments will be posted on the Compass2g and will be due before the beginning of the lecture. **NO** late homework will be accepted.
- **NO** collaboration or other solution sources are allowed on the problems assigned for homework or exams. It is important to explain your solutions clearly as it may affect your grades.
- There will be one virtual presentation starting from mid April. Each student will be given a research paper and he/she should read it carefully and present it to the class in about 35 min.

Course Grade Composition:

Item	% of grade
Homework Problem Sets	75%
Final Presentation	25%