EEE945 – Introdução aos Processos Estocásticos

1º Semestre de 2013
terças e quintas 13:00-14:40

Course Overview:

	Date	Subject:	Activity
1	14-May	Introduction to Markov chains and processes. Graph representation.	
2	16-May	Transition matrix. Stationary probabilities.	Problem set 1
3	21-May	Irreducibility. Ergodicity	
4	23-May	Periodicity. Recurrence and Transience.	Problem set 2
5	28-May	Markov Processes on Finite Spaces.	
6	4-Jun	Simulation.	Problem set 3
7	6-Jun	Hidden Markov Models.	
8	11-Jun	Markov Chains in Countable Spaces.	Problem set 4
9	13-Jun	Stochastic Differential Equations.	
10	18-Jun	Foster-Lyapunov Criterion.	Problem set 5
11	20-Jun	Problem Solving.	
12	25-Jun	Final Exam	
13	27-Jun		
14	2-Jul	Final Project Due	

Suggested Reading

- G. F. Lawler (2006), Introduction to Stochastic Processes, Chapman and Hall, New York.
- B. Hajek, (2012) An Exploration of Random Processes for Engineers. Available at: http://www.ifp.illinois.edu/~hajek/Papers/randomprocDec11.pdf
- S.P. Meyn and R.L. Tweedie (1993), Markov chains and stochastic stability. Springer-Verlag, London. Available at: http://www.meyn.ece.ufl.edu/archive/spm_files/book.html