ECE 537H1 - Random Processes

Introduction to the principles and properties of random processes, with applications to communications, control systems, and computer science. Topics include random vectors, random convergence, random processes, specifying random processes, Poisson and Gaussian processes, stationarity, mean square derivatives and integrals, ergodicity, power spectrum, linear systems with stochastic input, mean square estimation, Markov chains, recurrence, absorption, limiting and steady-state distributions, time reversibility, and balance equations.

Prerequisites: Introductory probability, linear systems


Instructor: A. Leon-Garcia (BA 4120; alberto.leongarcia@utoronto.ca) Office hours: Fridays 3 – 4 pm

Teaching assistant: Hazem Soliman, hazem.soliman115@gmail.com

Lectures: Wednesday 1-3 pm; Friday 2-3pm  Tutorial: Thursday 1-3 pm

Evaluation scheme: Homework, 10%; midterm, 40%; final, 50%. Homework will be graded solely on the basis of effort, not correctness. Solution to the homework problems will be discussed during tutorials. Midterm is schedule for October 27 during the tutorial period. Undergraduate and graduate students complete the same course work but are evaluated on separate scales.