Wireless Communications EE 670 Course Information

Aditya K. Jagannatham

Introduction

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Course Website

- http://home.iitk.ac.in/~adityaj/EE670_2013/EE670_2014.html
- This will be the central place for dissemination of all the course information

Text Books

- Fundamentals of Wireless Communication
  - David Tse and Pramod Viswanath
  - Cambridge University Press, 2005
  - http://www.eecs.berkeley.edu/~dtse/book.html
- Wireless Communications
  - Andrea Goldsmith
  - Cambridge University Press
- Wireless Communications: Principles and Practice, 2nd Edition
  - Theodore Rappaport
  - Prentice Hall PTR

Points Division

	Weightage
Assignments (Theory + MATLAB)	15%
Mini Project	10%
Mid-Sem	20%
Major-Quiz	15%
Term Paper	10%
End-Sem	30%

Prereqs

- Basic idea of Digital Communications
- Probability and Stochastic Processes
- Linear Algebra, Matrices etc.
- Comfort at Math.

Aims

- Has a theoretical and practical flavor.
- Theory behind wireless communication systems.
  - How is it different from conventional wireline based digital communications?
- Development of mathematical models and performance analysis of wireless systems.
- Intro to key wireless technologies such as CDMA, OFDM, MIMO etc.
- Intro to wireless standards such as GSM, WCDMA, LTE, to understand how everything comes together in a practical system.
- Term paper will focus on in-depth study of cutting edge wireless issues.