



Wireless Communications

EE 670

Course Information

Aditya K. Jagannatham



Introduction

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- Coordinates
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TAs

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Course Website

- http://home.iitk.ac.in/~adityaj/EE670_2014_Fall/E670_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% |
| Mid-Sem | 20% |
| Quiz-I | 15% |
| Quiz-II | 15% |
| Term Paper | 10% |
| End-Sem | 25% |



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.