EE 8510   Tuesday, March 1, 2005
Advanced Topics in Communications   Prof. N. Jindal

Project Information

A research project related to any topic in information theory is a required portion of this course. The project can either be original research, or an in depth survey of a relevant topic. Original work is strongly preferred, but a high quality survey is also acceptable.

- Individual projects are strongly preferred, but two students can collaborate on a project if it is clear that the project has sufficient scope.

- **Project Meetings:** Each student must meet with the instructor to discuss your choice of project. Meetings will be scheduled (tentatively) March 21-25.

- **Project Proposal:** A one-page proposal describing your project and containing key references must be turned in by Thursday, March 31.

- **Project Presentation:** Each student will give a 10-15 minute oral presentation during the last week of classes.

- **Project Report:** A final writeup of the project is due on the last day of classes, Friday, May 6. The writeup should not exceed 10 pages (single-column, 11 point).

A short list of potential topics:

- Single-user MIMO Capacity

- MIMO Broadcast Channel

- Information Theoretic Dualities (e.g. source/channel coding, MAC/BC)

- Multi-user Rate Distortion

- Cellular Network Capacity

- Information Theory and Networking

Feel free to come to my office hours to brainstorm for potential project ideas. Any information theory related topic (with sufficient scope) is okay.