A Unified Approach to Performance Evaluation of Diversity Systems on Fading Channels.

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Abstract—In this seminar, we present two unified analytical frameworks for evaluating the bit or symbol error probability (SER) of a broad class of coherent, differentially coherent and noncoherent digital communication systems with diversity receivers on generalized fading channels. The exact SER is mostly expressed in terms of a single finite-range integral and in some cases in the form of double finite-range integrals. This offers a convenient method to perform a comprehensive study of all common diversity combining techniques (maximal-ratio combining, equal-gain combining, selection combining and switched combining) with different modulation formats in a myriad of fading scenarios. The unified approach allows previously obtained results to be simplified both analytically and computationally, and new results to be obtained for special cases that heretofore have resisted a simple form.

Date: Thursday, **25 February 1999**, 13:30 - 14:30
Place: Room 117 EE Building
Info: `http://www.ee.lsu.edu/seminar`
Food: *Refreshments will be served.*