

EE 497B

**Probability and Random Processes
for Electrical Engineers**

Lecture 28

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Lecture 28 Topics

- Function of Two Random Variables: $W = g(X, Y)$
- Expected value of $W = g(X, Y)$

Functions of Two Random Variables

- Example: Binary Communications
 - M represents the message sent
 - N represents the additive channel noise
 - $R = g(M, N) = M + N$ represents the received signal