

A Contemporary Course on Probability plus Statistical Theory

(In Preparation)

CHAPTER TITLES

Chapter

1	Introducing Probability
2	Some Classic Combinatorics
3	Conditional Probability and Independence
4	Patterns, Paradoxes, and Coincidences
5	Probability in Genetics
6	Discrete Random Variables
7	Standard Discrete Distributions
8	Moments and Cumulants
9	Continuous Random Variables
10	Standard Continuous Distributions
11	Exponential Families and Unimodal Densities
12	Mixtures and Heavy Tailed Densities
13	Transformations
14	Multivariate Discrete Distributions
15	Multidimensional Continuous Distributions
16	Random Walk
17	Sampling Distributions
18	Order Statistics, Extremes and Spacings
19	Curse of Dimensionality
20	Convergence and Asymptotics
21	Copulas, Markov Chains and the Poisson Process
22	Introduction to Brownian Motion

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26	Distribution and Error of the MLE
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32	Bootstrap and Bootstrap Confidence Intervals
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