

# Introduction to Probability

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Cambridge University Press 2018

## Corrections and clarifications to the 2019 Reprinting

Last updated October 2, 2023. We thank the following individuals who sent comments: Daniele Cappelletti, Steffen Lempp, Karl Liechty, Armand M. Makowski, Jonathon Peterson, Amber Puha, Laurent Saloff-Coste, Philippe Sosoe, Peter Thomas.

### Chapter 1

**Page 40, Exercise 1.59.** The last sentence before the hint should be: Show that the probability that the needle intersects one of the parallel lines is  $2\ell/\pi$ .

**Page 48.** One instance of  $\{B, M, H\}$  should be  $\{F, M, H\}$ .

### Chapter 2

**Page 63-64, Example 2.39** In the computation it should have been explicitly noted that we assume that  $A_1$  and  $A_2$  are conditionally independent with respect to  $D$ , *and also with respect to  $D^c$* .

### Chapter 4

**p 176, exercise 4.39.** The example states that wheat cents were minted between 1909 and 1956. The year 1956 is incorrect. They were produced between 1909 and 1958.

### Chapter 6

**p 230, equation (6.30)** The term in front of the first integral should be  $\frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2(1-\rho^2)} + \frac{\rho^2 x^2}{2(2-\rho^2)}}$

### Appendix F

**Page 408.** The range of the variable  $n$  in the negative binomial probability mass function should be  $n \geq k$  instead of  $n \leq k$ .

**Page 409.** The probability density function of the gamma distribution should be  $f_X(t) = \frac{\lambda^r t^{r-1}}{\Gamma(r)} e^{-\lambda t}$  (in other words, replace  $x^{r-1}$  with  $t^{r-1}$ ).