Figure 1: Density histograms of rolls of a fair die converge to the probability histogram, which is the bottom histogram in the figure. The top histogram is based on 100 rolls, the second histogram is based on 1000 rolls and the third histogram is based on 10000 rolls.
Figure 2: Convergence of density histograms to a probability density function. The top histogram is based on 100 data values, the middle histogram is based on 1000 data values and the bottom histogram is based on 10000 data values.