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DISCRETE UNIVARIATE RANDOM VARIATE GENERATION

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Most of the early research done in random variate generation is in the area of continuous distributions. Not until 1979 was research published on exact, uniformly fast discrete univariate random variate generation. Since then the state of the art of discrete univariate random variate generation has been advanced steadily, and exact, uniformly fast algorithms are now available for Poisson, binomial, hypergeometric and negative binomial distributions. This paper surveys the algorithms for these commonly used univariate discrete distributions. Timing comparisons of some of the algorithms are presented along with the references of recent papers. A copy of the visual aids is also given.

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