

1056-60-785

Michael J.J. Barry* (mbarry@allegheny.edu), Department of Mathematics, Allegheny College, 520 N. Main St., Meadville, PA 16335. *The Density Function of the First Occurrence of a Binary Pattern.*

The probability density function associated with the first occurrence of a binary pattern in a sequence of independent Bernoulli trials was given in McDermott and Sheahan in *The Distribution of First Occurrence of Patterns of Outcomes of Bernoulli Experiments*, Mathematical Proceedings of the Royal Irish Academy **104A**(1)(2004), 1–15. We give a simpler expression for it in terms of a unique family of homogeneous polynomials in two variables. In the process, we obtain a recurrence relation for the density function and we study the coefficients of the homogeneous polynomials. (Received September 17, 2009)