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Recurrences for generating polynomials

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Abstract

In this talk we consider sequences of polynomials that satisfy differential–difference recurrences. Our interest is motivated by the fact that polynomials satisfying such recurrences frequently appear as generating polynomials of integer valued random variables that are of interest in discrete mathematics. It is, therefore, of interest to understand the properties of such polynomials and their probabilistic consequences. We will be primarily interested in the limiting distribution of the corresponding random variables. As an illustration we give a few examples, leading to a Poisson, normal, and Rayleigh distributions.

This is a joint work with Amanda Lohss.

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