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Distributions of polynomials of additive functions

The celebrated Erdős–Kac theorem says that if an additive arithmetic function satisfies certain mild hypotheses, then its values obey a normal distribution. In the years since, the “Erdős–Kac class” of functions whose values are normally distributed has been broadened to include certain non-additive functions and arithmetic functions restricted to interesting subsets of the integers, such as shifted primes. This talk will focus on recent joint work with Greg Martin (UBC) that further expands the Erdős–Kac class to include arbitrary sums and products of additive functions satisfying Erdős and Kac’s original requirements.