



## MANHATTAN ALGEBRA DAY

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*Applications of algorithmic randomness to algebra (and analysis)*

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*Abstract:*

We use computability theory to give the concept of randomness a formal, mathematical definition. A point in a computable probability space is said to be random if it does not have certain easily-defined measure-zero properties, and different types of properties give rise to different definitions of randomness. In recent years, the resulting notions of randomness have been used to characterize the sets of points that describe structures that possess certain algebraic properties or that satisfy various theorems in analysis. I will provide an introduction to randomness and survey some of these recent results.