

1154-05-783

**Torin Greenwood\*** ([torin.greenwood@ndsu.edu](mailto:torin.greenwood@ndsu.edu)). *Analyzing the outputs of grammars.*

Stochastic context-free grammars (SCFGs) use recursive rules to model families of objects, including languages, Catalan objects, and RNA secondary structures. Grammars can be converted into algebraic multivariate generating functions. Then, analytic combinatorics can yield insights into the distributions of objects grammars produce. However, slight modifications of grammatical rules can greatly alter the distribution of objects produced by a grammar. In this talk, we discuss examples and challenges of analyzing SCFGs at large. (Received September 10, 2019)