

1154-60-529

Leonid Petrov* (lenia.petrov@gmail.com), 141 Cabell Drive, Kerchof Hall, P.O. Box 40013, Charlottesville, VA 22902. *From Yang-Baxter equations to stochastic systems.*

Yang-Baxter equation (a class of local equivalence transformations preserving the partition function, i.e., the probability normalizing constant) is an indicator of integrability in two-dimensional models of statistical mechanics. I will explain how it can be utilized in a stochastic context, which brings new Markov chains on some well-studied models such as lozenge tilings, Totally Asymmetric Simple Exclusion Process (TASEP), and random matrices. (Received September 06, 2019)