北京师范大学随机数学研究中心

学术报告

报告题目：**RSK Algorithm with Applications to Random Combinatorial Optimizations**

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时间：2020-12-17（周四）， 16:00-17:30

地点：后主楼 1223

摘要

The Robinson-Schensted-Knuth algorithm was invented to ﬁnd the length of the longest increasing subsequences from a ﬁnite sequence of distinct real numbers. It is arguably recognized as one of the most useful algorithms in the ﬁeld of combinatorial optimization. In this talk we will ﬁrst describe such an algorithm, and then focus on its applications to random combinatorial optimization problems. In particular, we brieﬂy review two remarkable results: Baik, Deﬁt and Johansson (JAMS 1999) discovered the limiting distribution of the length of longest increasing subsequences of a sequence of i.i.d. uniform random variables; Johnsson (CMP 2000) established the limiting distribution of last passage percolation with i.i.d. geometric weights in the planar lattice. It turns out that a new era for the study of random growth processes has been since then open to us.