

Title: **Combinatorics for the East Model**

Author(s): **Fan Chung, Persi Diaconis, and Ronald Graham**

Technical Report number (Dept. of Statistics, Stanford Univ.): **2000-28**

Date: **September 2000**

Abstract:

We study the number of configurations in the East model of statistical physics. This may be pictured as sites in a line. The site at zero is always occupied. The site at $i > 0$ can only be changed if site $i - 1$ is occupied. If at most n occupied sites are permitted, we establish upper and lower bounds of the form $2^{\binom{n}{2}} n! c^n$ where $c < 1$ for the number of possible configurations.