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E J Janse van Rensburg* (rensburg@yorku.ca), Department of Mathematics & Statistics, York University, Toronto, Ontario M3J 1P3, Canada. *Lee-Yang and Fishers zeros in Adsorbing Self-Avoiding Walks.*

Partition function or Fisher zeros play a fundamental role in the theory of phase transitions in classical lattice statistical mechanics. In this talk some results on the properties of partition and generating function zeros in models of adsorbing self-avoiding walk are presented. Theorems constraining the distribution of zeros in the complex plane, based on the distribution of polynomial zeros, will be given. These results show that partition function zeros are constrained to be located in annular regions with center at the origin in the complex plane. Results on the angular distribution of zeros will also be presented. Numerical results on the distribution of zeros will be shown, based on approximate enumeration of square lattice walks using the GAS algorithm. (Received August 17, 2016)