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**Douglas Rizzolo\*** ([drizzolo@udel.edu](mailto:drizzolo@udel.edu)). *Connections between random matrices and pattern-avoiding permutations.*

We will discuss recent results on the structure of random pattern-avoiding permutations. The focus will be a connection between random  $k \cdots 321$ -avoiding permutations and the eigenvalues of a random matrix diffusion. In particular, we will give an invariance principle relating the RSK algorithm applied to a uniformly random  $k \cdots 321$ -avoiding permutation to the eigenvalues of a Hermitian Brownian bridge conditioned to have trace 0. (Received September 19, 2016)