

Contribution Title:	FREE PROBABILITY MEETS SUPERSYMMETRY
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The spectral correlation functions of  $N \times N$  random matrices (with probability measure  $\mu_N$ ) are expected, under certain conditions, to be universal in the large- $N$  limit. While substantial progress with this conjecture has been made for special situations, the problem remains open for the general case of matrix ensembles which are both non-Gaussian and non-invariant. This talk starts from the known fact that the log-Fourier transform of  $\mu_N$  relates to the Voiculescu  $R$ -transform (a key object in free probability theory) when the Fourier variable is of rank one. Interpreting and extending this relation from the perspective of the method of commuting and commuting variables (known as the supersymmetry method for short) we suggest a new approach to the universality conjecture for non-invariant non-Gaussian ensembles.