Spacings in Random Matrix Theory

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Abstract: One of the most striking phenomena of Random Matrix Theory is that several of their local eigenvalue statistics define universal distributions in the limit of large matrix dimensions. We focus on invariant matrix ensembles including the classical Gaussian ensembles GOE, GUE and GSE. In this talk we consider the empirical spacing distribution and its convergence to a universal limit. We show that the expected Kolmogorov distance of these distributions converges to zero as the matrix size tends to infinity.