

# Universality of determinantal point processes on Riemannian manifolds

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The unitary group of size  $n$  together with the Haar probability measure is called  $\text{CUE}(n)$  (Circular Unitary Ensemble of size  $n$ ). All the eigenvalues lie on the unit circle in the complex plane and they can be regarded as a determinantal point process on  $S^1$ . It is also known that the scaled point processes converge weakly to the determinantal point process associated with the so-called sine kernel as  $n$  tends to  $\infty$ . In this talk, we discuss a generalization of this fact.

This talk is based on a joint work with Makoto Katori (Chuo University).