

## Abstract

Consider an additive deformation of the complex Ginibre ensemble under a deterministic finite rank matrix  $A$ . We observe a threshold and further prove a phase transition for eigenvalue correlation functions, depending on the Jordan canonical form and eigenvalues of  $A$ . This is a non-Hermitian analogue of the famous Baik-Ben Arous-Peche transition in Random Matrix Theory. A similar result holds in the deformed quaternion Ginibre ensemble. Duality formulae between different matrix ensembles play a key role. Joint work with Lu Zhang (USTC)