1161-41-206   **Seungyeop Lee*** (`lees3@usf.edu`) and **Meng Yang**. *Asymptotics of the averaged characteristic polynomial for Ginibre Ensemble with finite number of fixed point charges.*

We consider the Ginibre Ensemble with a finite number of fixed point charges. The corresponding averaged characteristic polynomial of the Coulomb system has been identified with a multiple orthogonal polynomial (Type II). We obtain the asymptotic of the polynomials using the matrix Riemann-Hilbert analysis where the size of the matrix is determined by the number of fixed point charges. Such asymptotics are known only for a few (one or two) number of integer valued point charges (by Alfredo Deaño and Nick Simm). Our method yields the asymptotics for an arbitrary number of real valued point charges. The work is a joint project with Meng Yang (UC Louvain). (Received August 17, 2020)

1