Random Matrix Theory

Literature

Spectrum of large random asymmetric matrices

Sommers, Sompalinsky and Stein Physicsl Review Letters (1988)

From Wishart to Jacobi ensembles: statistical properties and applications

Pierpaolo Vivo

PhD Thesis 2008

Random Matrices

Eynard et al. arxiv 2015

Topics in random matrix theory

Terence Tao

https://terrytao.files.wordpress.com/2011/02/matrix-book.pdf

Statistical ensembles of complex, quaternion and real matrices

Jean Ginibre

Journal of mathematical physics (1965)

Please also look for additional literature.

The following concepts should be explained:

- ensembles of random matrices: symmetric, asymmetric, GOE, GUE, GSE
- Eigenvalues and spectrum
- Wigner semicircle law, circular law
- Derive the eigenvalue spectrum in the limit of large N for one ensemble of your choice