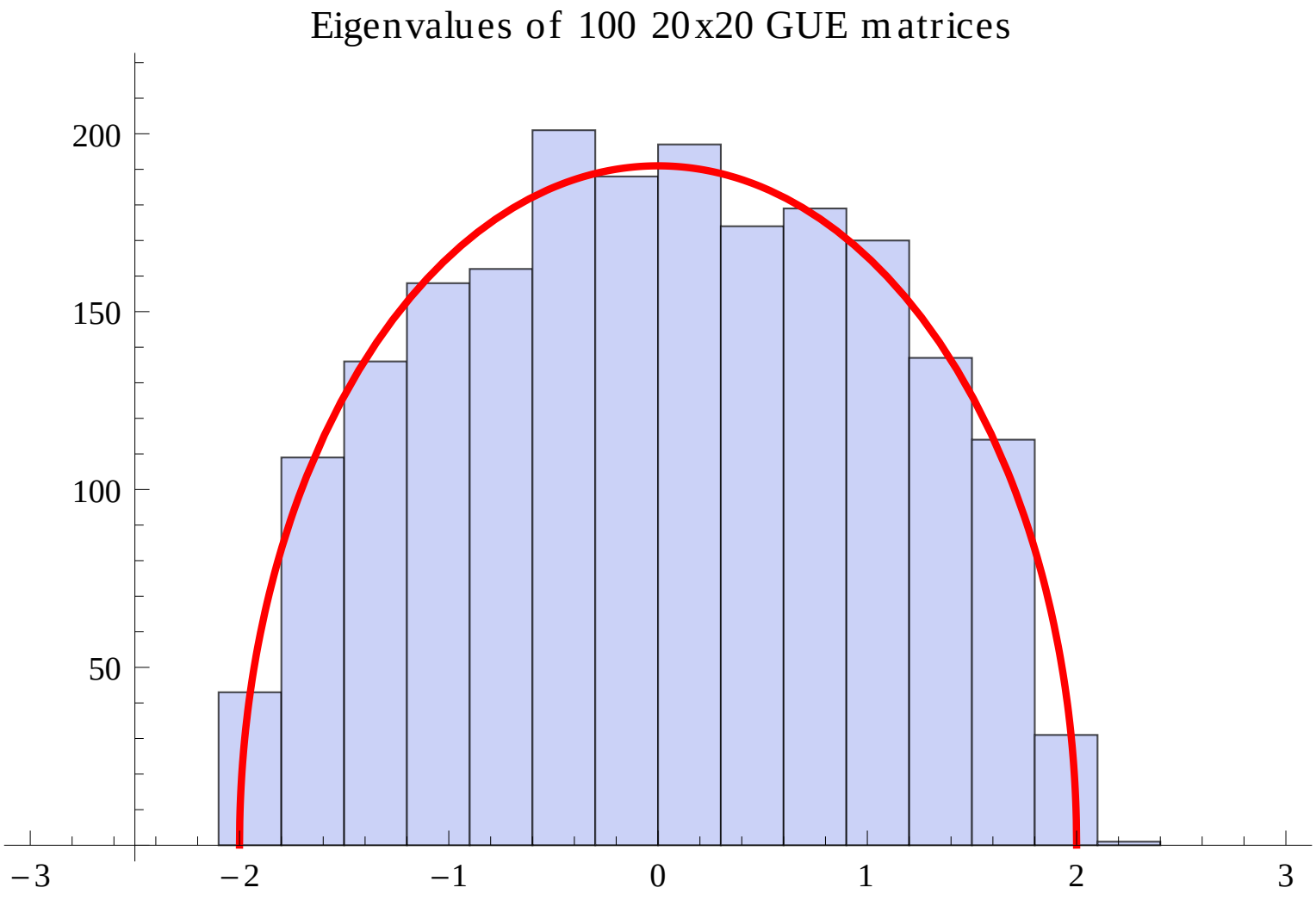
Gaussian Unitary Ensemble

Gaussian Unitary Ensemble (GUE):
M is Hermitian
dM is Lebesgue measure

$$dP_n(M) = \frac{1}{Z_n} \exp\left(-\frac{n}{2}\mathrm{tr}\, M^2\right)\, dM$$

Wigner's semicircle: $dP_n(\lambda) \to \frac{1}{2\pi}\sqrt{4-\lambda^2}\,d\lambda$



One point correlation function