

MATRIX MODELS are integrals, toy models for zero dimensional quantum field theories. Stated like this, they look rather empty! Instead, they turn out to have numerous applications to quantum geometry, quantum gravity and string theory, complex networks, nuclear physics and biological applications. A beautiful review with an introduction with many more references [here](#)

In these four lectures we will cover:

- Gaussian Integrals
- Matrix Integrals and the Large N expansion
- Random Surfaces and Statistical Models on Random Surfaces
- Overview and Relation to ongoing research