## James Binney

## Title: Modelling Galaxies

**Abstract**: Equilibrium dynamical models have a fundamental role to play in interpreting photometry and spectrocopy of galaxies. By Jeans theorem such models may be considered to have distribution functions (DF) that depend on up to three constants of stellar motion. Traditionally these have been taken to be energy and a component of angular momentum. For several reasons it is preferable to use only action integrals and not energy in the DF. DFs that generate realistic discs and halos will be described and it will be explained how components for stars and dark matter are added to produce a complete, self-consistent galaxy model that closely resembles any observed axisymmetric system.