

**Tobias, Steve:** *“Direct statistical simulation (DSS) of astrophysical flows”*

In this talk I will survey some open problems in astrophysical fluids and argue that even the basic statistical properties of such flows are poorly understood. I shall then describe the first steps in a program to determine these statistics directly (which we term DSS). Little is understood - but progress is being made via cumulant expansions and generalizations of the quasilinear approximation.