

## ASI Workshop WS5 Schedule (19/02/2021):

**9.00AM-10.45AM JSB**

**Lecture** - Introduction to Distribution Functions

**Hands on Session** - Generating Random Numbers from Arbitrary Distribution Functions

**10:45AM-11:00AM Break**

**11:00AM - 12.45PM NK**

**Lecture** - Overview of Structure Formation

**Hands on Session** - i/Estimating the luminosity function from the SDSS Survey. ii/Fitting the luminosity function to a Schechter Function. iii/Generating a realisation of a Schechter function.

**12:45PM - 02:00PM Lunch**

**02:00PM - 03:00PM NK/AP**

**Lecture:** N-Body Simulations and data products (halo/subhalo catalogs).

**Lecture+Hands-on-Session** - halo + subhalo mass functions from the simulation catalog, draw parallels with luminosity. Discuss  $M_{\text{peak}}$  as a proxy for halo mass. Visualise a slice of the catalog.

**03:00PM - 03:15PM Break**

**03:15PM - 04:30PM NK/AP**

**Lecture+Hands-on-Session** - Abundance matching. Generating Mock Galaxy Catalog from the Subhalo Catalog.

**04:30PM - 06:00PM AP**

Talk about 2pcf, DD/RR, DD implementation. Show brute force code. Show 2pcf for full sample. Then split by luminosity (compare Zehavi). Give assignments for SHAM with other variables and 2pcf split by other variables.