Lecture 2 : Outline

- Discussion of the FLRW metric

  - Different forms of the metric
  - Comoving coordinates
  - Conformal time

- Trajectories in an expanding Universe

  - Relationship between redshift and scale factor
  - wavelength redshifting
  - doppler shifts, velocity decays
  - lagrangian view
    * comoving velocities decay as a^{-2} for non-relativistic particles, a^{-1} for relativistic particles
    * physical velocities decay as a^{-1} for non-relativistic particles, a^0 for relativistic particles

Reading

(section lists are approximate)

- Sec 2.2-2.4 : Huterer
- Sec 2.1 - 2.2 : Baumann