"Observational Prospects"

Question: What should we do now? What is the "to-do list"?

Answer: We categorize each item by:

D: Done. Algorithm (estimator) has been developed and has been applied to the real data.
G: Good. Algorithm (estimator) has been developed and has been applied to the real data, but some outstanding issues remain.
C: Computed. Algorithm (estimator) has been developed, but not applied to the real data yet.
X: Not done. No stable algorithm (estimator) has been developed, nor has it been applied to the real data.

Cosmic Microwave Background

D: Bispectrum
G: Trispectrum
D: Minkowski functionals
X: Other topology measures
G: Phase correlations (X: theoretical predictions)
C: Spectra distortion (e.g., y-distortion and mu-distortion)

Large-scale Structure (Halos and Galaxies)

G: Power spectrum (scale-dependent bias)
C: Bispectrum
X: Trispectrum
G: Abundance of halos
G: Rare-objects statistics
X: Abundance of voids
X: Anything that has to do with voids
G: Minkowski functionals
X: Other topology measures
C: Multi-tracer method
C: Halo shapes and profiles

Be aware of baryonic effects!

Gravitational lensing

C: Power spectrum (modification due to non-Gaussianity)
C: Bispectrum
X: Trispectrum
C: Abundance of mass peaks
X: Topology measures

Be aware of baryonic effects!

Reionization and 21cm lines

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