# KMI-Theory Seminar

Tuesday, January 31, 2012

5:00 pm, KMI Science Symposia (ES-635)

## "Modeling and Measuring Redshift Space Distortions and the Alcock-Paczynski Effect in the SDSS-III Baryon Oscillation Spectroscopic Survey"


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### Abstract:

Interest in using redshift space distortions (RSD) as a precise test of General Relativity on large scales has exploded in the last few years, but our theoretical models must be improved to match the statistical precision of current data. In this talk I will review of physics of RSD in configuration space. While many recent studies focus on understanding dark matter clustering in redshift space, galaxies occupy special places in the universe: dark matter halos. Our model reproduces the complex dependence of redshift space clustering on halo bias seen in N-body simulations and is sufficiently precise to model the final BOSS dataset on scales of r>~25Mpc/h. I will present a preliminary RSD and Alcock-Paczynski constraints from anisotropic galaxy clustering in the SDSS-III Baryon Oscillation Spectroscopic Survey.