# COSMOLOGY WITH THE COSMIC WEB

J. E. Forero-Romero[1]

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The cosmic web is one of the most conspicous features of the large-scale structure of the Universe.

**The method**

**Galaxy alignments and the Local Group**.

**Constraining Cosmological Parameters**. Using the cosmic web, prposed a method based on the redshift dependence of the Alcock-Paczynski (AP) test to constrain cosmological parameters (Li et al. 2014). The method uses the fact that the galaxy density gradient field should look isotropic as a function of redshift. That is, the filaments in the cosmic web, should not have a prefered direction in comoving coordinates. Any radial or tangential anisotropy can only be produced by using the incorrect cosmological parameters to translate the observed redshifts into comoving coordinates.

**Future Surveys**. The Dark Energy Spectroscopic Instrument (DESI) (DESI Collaboration 2016) is a ground based dark energy experiment that will study Barion Acoustic Oscillations (BAO). It will measure more than 30 million galaxy and quasar redshifts in the redshift range $1.0 < z < 3.5$ to measure the BAO feature. Additionally, DESI will conduct a magnitude-limit survey with a median redshift of 0.2 comprising approximately 10 million galaxies, which will provide an excellent oppportunity to extend the cosmic web studies presented so far.

[1]Departamento de Física, Universidad de los Andes, Cra 1 18A-10, Bloque Ip, Bogotá, Colombia. (je.forero@uniandes.edu.co).

## REFERENCES

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