“Mapping the Large Scale Structure of the Cosmos from the Big Bang to the Present”

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4:10 – 5:00 pm, 108 Reid

Abstract: Understanding the structure of the universe on the largest and most distant scales is one of the central topics in observational astrophysics. Successful measurements of cosmological structures require precise and sensitive instruments both on the ground and in space. Enabled by modern detector technologies and carefully designed experiments, exciting new observational and data analysis techniques are beginning to yield dramatic new results at a variety of wavelengths. In particular, results using Intensity Mapping methods from optical to radio wavelengths are in the process of revolutionizing our understanding of the large scale structure of the cosmos. I will review Intensity Mapping (and related) methods to show that they provide a holistic view of cosmic structure, and highlight recent results emerging from a variety of experiments that highlight the need for new, specialized instruments on ground-based, sub-orbital, and orbital platforms to help build an overall picture of the evolution of the universe on the largest scales.

Host: Charles Kankelborg
Refreshments 3:45 p.m.  EPS 2nd Floor Atrium

Dr. Zemcov is a candidate for the Physics Space Science Faculty position.