

Weekly Calendar & News

March 5-10, 2018

Departmental Colloquium

Deriving Loop Quantum Cosmology from Diffeomorphism Invariance

Jonathan Engle

Florida Atlantic University

Host: Ivan Agullo

3:30 PM Thursday, March 8 at 119 Nicholson Hall

- Refreshments served at 3:10 PM in 232 (Library) Nicholson Hall •

Loop quantum gravity is an approach to the quantization of general relativity in which Einstein's principle of diffeomorphism covariance plays a central role. Loop quantum cosmology is a theory in which the principles of loop quantum gravity are applied in the homogeneous, and optionally isotropic, context, leading to predictions for the cosmic microwave background which are the best chance for testing, through observation, the principles of loop quantum gravity. Several results over the years, including a few results by the speaker and collaborators over the last year, have demonstrated (1.) how the Hilbert space of states of loop quantum cosmology and action of basic operators thereon is uniquely determined by the requirement of diffeomorphism covariance, and (2.) the degree to which the dynamics of loop quantum cosmology is similarly determined. This talk will summarize these results.

LSU Physics & Astronomy in the News

- [LSU/MBPCC Medical Physics Program 2018 Newsletters](#)
- [Dr. Mette Gaarde on Attoseconds and Working with Undergraduate Students](#)
- [Shorewood School District To Honor Distinguished Alumni including Dr. Wayne Newhauser](#)