

Title

**Dynamics of inhomogeneous cosmological perturbations of the Nariai spacetime.**

Abstract:

*In the first part of the talk, we will introduce a pseudo-spectral approach for treating the initial value problem on certain classes of inhomogeneous cosmological spacetimes. In the second part, and as an application of our infrastructure, we will discuss the nonlinear instability of the Nariai spacetime, which emerges as a solution of the vacuum Einstein field equations with cosmological constant and that is at the borderline between gravitational collapse and de-Sitter-like exponential expansion.*

Dr. Leon Escobar  
Postdoctoral Fellow  
Department of Mathematics  
University of Tuebingen  
Germany