THE CHINESE UNIVERSITY OF HONG KONG

Department of Physics

COLLOQUIUM

Reconstructing Initial Conditions to Simulate the Cosmic Web

by



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Date: December 18, 2023 (Monday)
Time: 3:00 - 4:00 p.m.
Place: L4, Science Centre, CUHK

(Light refreshments will be served at SCNB 1/F lobby from 2:30 to 2:50 p.m.)

ALL INTERESTED ARE WELCOME
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Abstract

ELUCID is a method to reconstruct the initial linear density field from an input nonlinear density field, employing the Hamiltonian Markov Chain Monte Carlo (HMC) algorithm combined with Particle-mesh (PM) dynamics. My talk will describe its application and the constrained N-body and gas simulations in the SDSS volume. I will show how to use the reconstruction to understand galaxies and gas in the cosmic web, as well as the underlying physics.

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