



Simon Muya Kasanda

41 – 02/11/1972

Applied Mathematics

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D.R Congo

I mainly work in Observational Cosmology, looking at the Cosmic Microwave Background (CMB) and the Large Scales Structures (LSS) of the universe to understanding the nature and statistics of the initial conditions of the perturbations in the universe.

CURRENT RESEARCH

Topic	Methodology	Application
- Understanding the phenomenology of isocurvature modes; - Nature of the primordial perturbations - Epoch or Reionization	• Analytic approach • Data analysis • Fisher matrix forecast • Monte-Carlo Markov Chain simulations	-parallel coding and supercomputing - modeling - Critical thinking

UKZN Publications

“CMB temperature, polarization and lensing constraints on primordial perturbations”, in preparation
“*Observational Signatures of Isocurvature Perturbations in the CMB*”, in preparation
“*Cosmic Microwave Background Polarization Constraints on Isocurvature modes*”, in preparation

Past Researches

“*Fundamental Uncertainty in the BAO Scale from Isocurvature Modes*”, Physics Letters B, Volume 696, Issue 5, 433-437 (2011)

“*The Sensitivity of BAO Dark Energy Constraints to Isocurvature Perturbations*”, Journal of Cosmology and Astroparticle Physics, Volume 021 (2012)

Future Interests

Epoch of Reionization studies, Academia
Square Kilometre Array telescope

Extra Interests

Preaching and Teaching the word of God