

NITheCS MINI-SCHOOL:

Exploring Quantum Aspects of Gravitational Waves

Dr Partha Nandi (Stellenbosch University)

Wed 8, 15, 22 & 29 May 2024 | 14h00-15h00 SAST
Attend online

--- A certificate of attendance will be awarded to registrants who attend all four lectures ---

ABSTRACT

This course will delve into the dynamics of particles within curved spacetime, focusing on their interactions with the background geometry. We will analyze classical and quantum particle dynamics in the presence of gravitational waves, exploring how classical gravitational waves induce quantum memory effects. Additionally, we will investigate how quantum mechanical detectors can capture the quantum nature of gravitational waves.

BIOGRAPHY



Dr Partha Nandi completed his PhD in Physics at S.N. Bose National Centre for Basic Sciences, India, in 2022. He is currently serving as a postdoctoral fellow at Stellenbosch University since 2023. His research interests span theoretical high-energy physics and quantum gravitational physics, and he has over 5 years of teaching experience along with numerous publications in reputable international journals.

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