

NITheCS Webinar

NITheCS
National Institute for Theoretical and Computational Sciences

Gravity sourced by quantum matter: a subjective overview

Prof Akira Matsumura

(Quantum and Spacetime Research Institute (QuaSR), Kyushu University, Japan)

Friday, 16 October 2026 | 12h00 – 13h00 SAST

Venues: NITheCS Boardroom, Stellenbosch University, and Online

ABSTRACT

With recent advances in quantum information science, there has been growing interest in experimentally testing the gravitational field sourced by quantum matter. In particular, the quantum superposition of gravitational fields and the gravitationally induced quantum entanglement have emerged as key experimental targets. In this talk, I outline theoretical progress towards experimental tests of gravity sourced by quantum matter, and survey models of such gravity, including recently proposed classical–quantum gravity models.

BIOGRAPHY

Prof Akira Matsumura obtained his PhD from Nagoya University in Japan in 2020. He was a postdoctoral researcher at Kyushu University from 2020 to 2023 and has served as an assistant professor there since 2023.



REGISTER TO ATTEND:

SUBSCRIBE TO THE NITheCS MAILING LIST:

science, technology & innovation
Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA

NRF National Research Foundation