



Contribution ID: 351

Type: **not specified**

Application of Quantum Complexity in Neutrino Oscillations

Tuesday, 12 September 2023 17:00 (15 minutes)

Neutrino flavor oscillation is a widely studied physical phenomena with far reaching consequences in understanding the standard model of particle physics and to search for physics beyond it. Oscillation arises because of mixing of the mass states in flavor states, and their evolution over time. It is an inherent quantum system for which flavor transitions are traditionally studied with probabilistic measures. Quantum information theory in recent years have seen applications in neutrino oscillation physics. Here, we will present results from an investigation of neutrino oscillations using quantum spread complexities and consequences for high-energy neutrinos.

Primary author: RAZZAQUE, Soebur (University of Johannesburg Centre for Astro-Particle Physics)

Co-authors: DIXIT, Khushboo (University of Johannesburg Centre for Astro-Particle Physics); HAQUE, S. Shajidul (University of Johannesburg Centre for Astro-Particle Physics)

Presenter: RAZZAQUE, Soebur (University of Johannesburg Centre for Astro-Particle Physics)

Session Classification: NUS: Neutrinos

Track Classification: Neutrinos