

100 years after the first attempts to establish a rigorous mathematical framework for quantum theory, we aim to retrace the historical pathways and explore how quantum theory has evolved over the years.

This seminar will cover key milestones in the development of quantum theory, including the matrix formulation by Heisenberg, Born, and Jordan; the Schrödinger equation; the Copenhagen interpretation; the Einstein-Podolsky-Rosen (EPR) paradox, which introduced the concept of entangled states; Bell's inequality, which paved the way for experimental validation; and, if time permits, subsequent advancements in the field.