



Karlstad Applied Analysis Seminar (2025)

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Quantum theory and mathematics.

A 100-year success story

Abstract

The year 2025 marks the 100th anniversary of the papers by Heisenberg, Schrödinger, and Born-Jordan, which laid the foundations of modern quantum mechanics. In recognition of these seminal papers, UNESCO has declared 2025 the International Year of Quantum Science and Technology.

In this talk, we will explore the interplay between quantum theories and mathematics. Through several examples, we will show that mathematics provides crucial technology for the study of quantum theories and how quantum theories stimulate the development of new mathematics.