



# CERN Colloquium

SPEAKER: Sean Carroll

TITLE: **The Many Worlds of Quantum Mechanics**

DATE: 21 Mar 2019, 16:30

PLACE: 500-1-001 - Main Auditorium

## ABSTRACT

One of the great intellectual achievements of the twentieth century was the theory of quantum mechanics, according to which observational results can only be predicted probabilistically rather than with certainty. Yet, after decades in which the theory has been successfully used on an everyday basis, most physicists would agree that we still don't truly understand what it means. I will talk about the source of this puzzlement, and explain why an increasing number of physicists are led to an apparently astonishing conclusion: that the world we experience is constantly branching into different versions, representing the different possible outcome of quantum measurements. This could have important consequences for quantum gravity and the emergence of spacetime.

Organised by: W. Lerche/TH-SP..... Tea and coffee will be served at 16h00