

THEORETICAL SCIENCES VISITING PROGRAM

TSVPTALK

WHATIS QUANTUM MECHANICS ABOUT?

2022 SEPT. 15_{TH} 16:00-17:00 HYBRID L4E48, ZOOM

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Despite enormous success in and beyond fundamental physics, there is widespread disagreement, even among practitioners, about how to understand and interpret quantum theory. The mathematical simplicity and technological applicability belies a discord so deep that there is not even consensus about the kind of objects the theory describes. This places quantum theory in a unique position in the history of science. In this talk, I'll describe some reasons why understanding the theory is so difficult, some work that helps us understand it better, some work that makes understanding it harder, and conclude with an extremely biased take on the way out of the mire.

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LEON LOVERIDGE

Leon Loveridge is an associate professor at the University of South-Eastern Norway. His research interests are in the mathematical foundations of quantum mechanics, where he aims to understand the physical content of the theory through the lens of mathematics. Recent work is largely focussed on quantum reference frames and general probabilistic theories. He has side interests in pure mathematics (mostly functional analysis and operator theory), and the history and philosophy of science, particularly quantum theory.



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