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What Is Quantum Mechanics? Revisiting a Neglected Historical Path

Wednesday 10 September 2025 09:00 (40 minutes)

This talk revisits a lesser-known trajectory in the development of quantum theory, beginning with Louis de Broglie's 1924 doctoral thesis, in which he first proposed that waves guide particles. This idea introduced a radically different view of quantum phenomena. This thread was taken up and developed further by David Bohm in 1952, offering a clear and coherent theoretical framework that recovers all standard predictions while challenging the dominant interpretation. John Bell, in the following decades, clarified the conceptual stakes of this alternative route and showed that its core features introduce a perspective that continues to inform foundational debates. Retracing this path sheds light on what quantum mechanics could have been - and perhaps still is - beyond the standard narrative.

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