

Abstract Submitted
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Hydrodynamic quantum analogs¹ JOHN BUSH, MIT — We review recent developments in our understanding of droplets walking on a vibrating fluid bath. Particular attention is given to highlighting the manner in which pilot-wave dynamics gives rise to quantization, and chaotic pilot-wave dynamics to quantum-like statistics. The first links between between pilot-wave dynamics and relativistic effects are explored, along with the relation between this hydrodynamic system and existing realist models of quantum mechanics. Future directions are discussed.

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