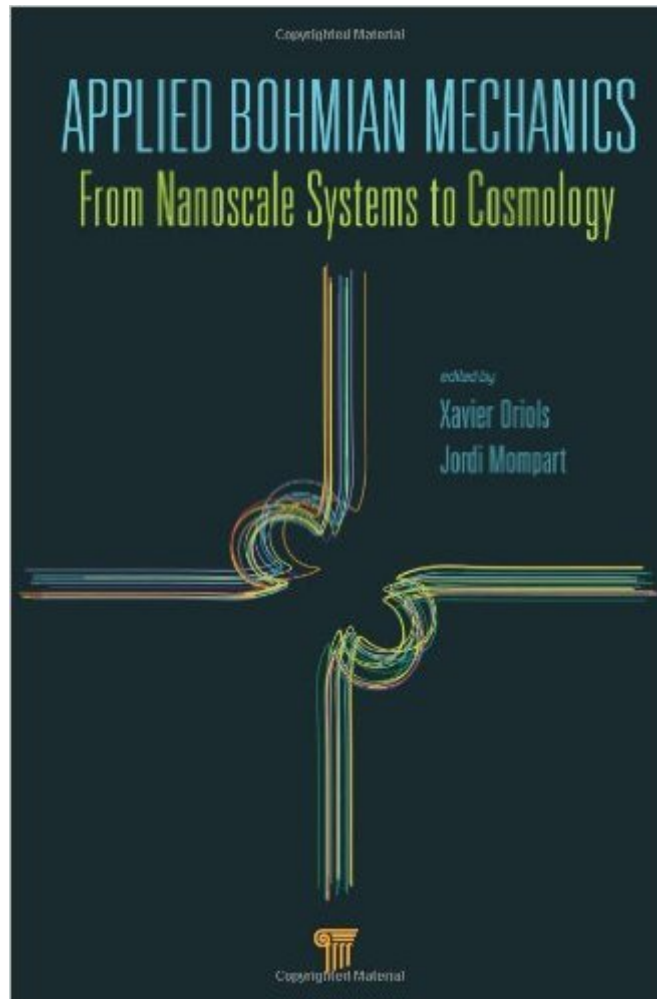# Applied Bohmian Mechanics: From Nanoscale Systems To Cosmology

Synopsis

Most textbooks explain quantum mechanics as a story where each step follows naturally from the one preceding it. However, the development of quantum mechanics was exactly the opposite. It was a zigzagging route full of personal disputes where scientists were forced to abandon well-established classical concepts and to explore new and imaginative routes. This book demonstrates the huge practical utility of another of these routes in explaining quantum phenomena in various research fields. Bohmian mechanicsâ •the formulation of the quantum theory pioneered by Louis de Broglie and David Bohmâ •offers an alternative mathematical formulation of quantum phenomena in terms of quantum trajectories. It sheds light on the limits and extensions of our present understanding of quantum mechanics toward other paradigms, such as relativity or cosmology.

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