

Abstract Submitted
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Solving the mystery of wave/particle duality—the road to a unified theory of physics DENNIS CROSSLEY, University of Wisconsin-Sheboygan — The mystery of wave/particle duality persists because of the stubborn adherence to the point-particle model of elementary particles. This has excluded a whole class of theories based on a three-dimensional extended wave model. It is this class of theories which holds the promise of giving both an intuitively obvious resolution to the mystery of wave/particle duality and the key to the unification of the fundamental forces. It has been incredibly difficult, however, to construct a wave model that is consistent with the observed behavior of the objects we call elementary particles. We present here a new wave model which holds the promise of being just such a consistent model. This model gives an intuitively obvious explanation of wave/particle duality. Furthermore, this model opens up a new path in the search for a unified theory of elementary particles and the fundamental forces.

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