RUXANDRA MORARU, University of Waterloo

Born geometry

A Born structure on a $2n$-manifold M consists of a quadruple (I, J, K, g) where g is a pseudo-Riemannian metric on M of split signature (n, n) and (I, J, K) is a para-hypercomplex structure on M such that gI and gJ are both symmetric, and gK is skew-symmetric. Born structures are thus para-hypercomplex structures together with special types of pseudo-Riemannian metrics. These structures were introduced in 2014 by L. Freidel, R. G. Leigh and D. Minic as a geometric background for a duality symmetric formulation of string theory called metastring theory. In this talk, I will describe some of their geometry and explain how they fit into the context of generalized geometry.