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The quantal algebra and the principle of complementarity SAMIR LIPOVACA, None — We will derive the quantal algebra based on the general complementary concepts platform where the anticommutator is understood as a complementary concept of a commutator. An obvious property of a commutator is that it is antisymmetrical. It reminds us of the antisymmetrical tensor of the electromagnetic field. We recall that homogeneous pair of Maxwell's equations can be written as a single tensor equation. If we replace the tensor in this equation by the commutator we arrive at the Jacobi identity which is the first defining identity of the quantal algebra. If we replace commutators by anticommutators in the Jacobi identity, obviously there is no possibility of terms cancelation due to only addition. A subtraction between two successive terms leads to the second defining identity of the quantal algebra. There is always some relationship between complementary concepts. Guided by this observation we seek a relation between the commutator and the anticommutator and arrive at the third defining identity of the quantal algebra. Identities with the unit element are immediate consequences of the commutator and anticommutator definitions.

Samir Lipovaca
None

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