# Groups, Algebras, and Particles

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I will introduce groups and representations, and I will use the matrix Lie group SU(2) and its corresponding real Lie algebra su(2) as an important example. A detailed treatment of representations of sl(2), the complexification of su(2), will be applied to the classification of subatomic particles. I will give a relationship between the notations and terminologies of mathematicians and physicists.

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