

Yorck Sommerhäuser (Memorial University of Newfoundland)

Hopf Algebras - A Short Introduction

A Hopf algebra is an algebra for which it is possible to form the tensor product of two representations. In order to do that, one needs an additional structure element, the so-called coproduct. In view of its purpose, it is natural to require certain conditions for the coproduct that are dual to standard properties of products, such as associativity. In the talk, we explain more precisely how these conditions arise and then survey major results about Hopf algebras, especially those that generalize important results for finite groups, for example Cauchy's theorem.