International conference on
MODULES AND REPRESENTATION THEORY
Cluj-Napoca, July 7 – 12, 2008

Hopf algebras with non-zero integrals

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Integrals have been key ingredients in the proof of several fundamental results about Hopf algebras. Hopf algebras with non-zero integrals appear in representation theory of groups, topological groups, and quantum groups. From a coalgebraic point of view, Hopf algebras with non-zero integrals are characterized by the co-Frobenius property of the underlying coalgebra structure. We follow this approach to present structure results about Hopf algebras with non-zero integrals, and to construct large classes of such objects.