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Ramat Gan, Israel. *From group theory to Hopf algebras via integrals.*

Left coideal subalgebras are the appropriate analogue in Hopf algebras of subgroups in groups. They both have integrals that play a central role in their structure theory and give rise to Harmonic analysis for Hopf algebras. Hopf quotients which are analogues of group quotients are realized by integrals. We use this point of view to give intrinsic definitions of nilpotency and solvability of Hopf algebras. (Received September 17, 2017)