

Isaac Oppong (Kent) – On the first Hochschild cohomology group of the simple quotients of $U_q^+(\mathfrak{g})$

Abstract: In line with a well-known result by Dixmier, it is natural to consider the simple quotients of $U_q^+(\mathfrak{g})$ as quantum analogues of the Weyl algebras. Motivated by this, we study a family of primitive quotients R_{α} of $U_q^+(\mathfrak{g})$, and compute their Lie algebra of derivations in this talk. We conclude that the first Hochschild cohomology group of R_{α} is of dimension $n-l$, where n is the rank of \mathfrak{g} and l is the Krull dimension of the centre of $U_q^+(\mathfrak{g})$.