



富山大学
理学部
数学科

Department of Mathematics
Faculty of Science
University of Toyama

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【 日 時 】 2019 年 8 月 23 日 (金) 14 : 00 ~ 15 : 00

【 場 所 】 富山大学理学部 B 棟 1 階 B121 室

【 講 演 者 】 Libin Li 氏

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【 講演題目 】 The center subalgebra of the quantized enveloping algebra of a finite dimensional simple Lie algebra

【講演概要】

Let \mathfrak{g} be a finite dimensional simple complex Lie algebra and $U = U_q(\mathfrak{g})$ the quantized enveloping algebra (in the sense of Jantzen) with q being generic. We show that the center $Z(U_q(\mathfrak{g}))$ of the quantum group $U_q(\mathfrak{g})$ is isomorphic to a monoid algebra, and that $Z(U_q(\mathfrak{g}))$ is a polynomial algebra if and only if \mathfrak{g} is of type $A_1, B_n, C_n, D_{2k+2}, E_7, E_8, F_4$ or G_2 . Moreover, when \mathfrak{g} is of type D_n with n odd, then $Z(U_q(\mathfrak{g}))$ is isomorphic to a quotient algebra of a polynomial algebra in $n+1$ variables with one relation; when \mathfrak{g} is of type E_6 , then $Z(U_q(\mathfrak{g}))$ is isomorphic to a quotient algebra of a polynomial algebra in fourteen variables with eight relations; when \mathfrak{g} is of type A_n , then $Z(U_q(\mathfrak{g}))$ is isomorphic to a quotient algebra of a polynomial algebra described by n -sequences.

The results reported here are based on the joint work with Limeng Xia and Yinhuo Zhang.

* 13 時 30 分よりお茶を準備してお待ちしております。



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