BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

ISOMORPHISM BETWEEN QUANTUM AND CLASSICAL SL(N)

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October 10, 2018, 4:00 – 5:00pm
Math/Computer Science, Room 148
111 Cummington Street, Boston

Tea: 3:45pm in Room 144

Abstract: Quantum groups, introduced by Drinfeld and Jimbo, are Hopf algebras naturally associated to simple Lie algebras. For a simple Lie algebra $\mathfrak{g}$, the quantum group $U_h(\mathfrak{g})$ is known to be isomorphic, as an algebra, to the enveloping algebra $U(\mathfrak{g})[[h]]$ (where h is a formal variable). This isomorphism exists due to a non-trivial cohomological argument and has only been written down for $\mathfrak{g} = \mathfrak{sl}(2)$ by Drinfeld and Chari-Pressley. In this talk, I will give an explicit formula resulting in such an isomorphism between $U_h(\mathfrak{sl}(n))$ and $U(\mathfrak{sl}(n))[[h]]$ for every n 2. This talk is based on a joint work with Andrea Appel (arxiv:1712.03601)

See `http://math.bu.edu/research/geom/seminar.html` or contact Yoosik Kim *yoosik@bu.edu* or Siu-Cheong Lau *lau@bu.edu* for more information.