学术报告

2023
MATHEMATICS

Quantum affine algebras and KLR algebras

李建荣　奥地利维也纳大学

邀请人：胡峻

摘要：Recently, Baumann-Kamnitzer-Knutson introduced a remarkable algebra morphism: \bar{D} from C[N] to the field of rational functions C(a_1, ..., a_n), where N is the unipotent radical of a simply laced complex algebraic group and a_i are simple roots, in their proof of a conjecture of Muthiah about MV basis of C[N]. The algebra C[N] and a larger algebra K_0(C^{\xi}) have monoidal categorifications using representations of quantum affine algebras introduced by Hernandez and Leclerc. We defined an algebra morphism \tilde{D} from K_0(C^{\xi}) to C(a_1, ..., a_n) and proved that when restricts to C[N], \tilde{D} coincides with \bar{D}. Moreover, using \tilde{D} and \bar{D}, we can recover information of q-characters of representations of quantum affine algebras from ungraded characters of modules of KLR algebras and vice versa. This is joint work with Elie Casbi.

时间：2023年3月6日 14：30-15：30

地点：文萃楼E909

北京理工大學
数学与统计学院