

# Quantum affine algebras and functional relations

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By the universal integrability objects we mean certain monodromy-type and transfer-type operators, where the representation in the auxiliary space is fixed, while the representation in the quantum space is not. This notion is actually determined by the structure of the universal R-matrix. We call functional relations involving such universal integrability objects, and so, being independent of the representation in the quantum space, the universal functional relations. We derive the whole set of the universal functional relations for the quantum integrable systems associated with the quantum groups of affine loop algebras of lower and higher ranks. We also specialize the universal functional relations to the case, where the quantum space is the state space of a discrete spin chain.