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"Quantum Toda Lattice and Representation Theory".

Abstract:

Quantum Toda Lattice is a famous model which displays deep connections both with the Representation Theory of semisimple Lie groups and with the Quantum Inverse Scattering Method. Kostant's famous discovery linked Toda Lattice to the theory of generalized Whittaker functions. New formulae, due mainly to Lebedev and his collaborators, are based on Sklyanin's ideology of quantum separation of variables. Interaction between the two approaches sheds a new light on classical constructions of Representation Theory.