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The Yangian and the quantum loop algebra of a simple Lie algebra arise naturally in the study of the rational and trigonometric solutions of the Yang–Baxter equation, respectively. The aim of this talk is to establish an explicit relation between these two Hopf algebras. More precisely, we will show that a certain subcategory of finite–dimensional representations of the Yangian is isomorphic, as a tensor category, to the category of finite–dimensional representations of the quantum loop algebra.

The isomorphism between these two categories is governed by the monodromy of an abelian difference equation. Moreover, the twist relating the tensor products is a solution to an abelian version of the qKZ equations of Frenkel and Reshetikhin. (Received September 07, 2013)