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Affine Yangians of type A and non-rectangular W -algebras of type A

We will talk about how to construct a homomorphism from the affine Yangian of type A to the universal enveloping algebra of a non-rectangular W -algebra of type A . This homomorphism is an affine analogue of the one given by De Sole-Kac-Valeri and is surjective in the rectangular case. It is constructed by using the coproduct for the affine Yangian of type A and the Miura map for a W -algebra. As a consequence, we can obtain the compatibility between the coproduct for the affine Yangian and the parabolic induction for a non-rectangular W -algebra are compatible through this homomorphism. We expect that this homomorphism will be helpful for the generalization of the AGT conjecture, which will give a geometric representation of a W -algebra of type A .