

I will report on recent and ongoing joint work with Bart Vlaar aimed at the construction of k -matrices (that is, solution of twisted reflection equations) for category \mathcal{O} integrable representations of quantum Kac-Moody algebras. In the affine case, our construction is conjectured to extend to the category of finite-dimensional representation of quantum loop algebras, producing a parameter-dependent meromorphic operator satisfying the spectral reflection equation