

Title: Critical Convolution Algebras and Quantum Loop Groups

Abstract: I will introduce a new family of algebras attached to quivers with potentials, using critical K-theory, which generalize the convolution algebras attached to quivers defined by Nakajima. As an application I will give (for Dynkin types) a geometrical construction of Kirillov-Reshetikhin and prefundamental representations of the quantum loop group (or a shifted version). I will also explain the link with K-theoretical Hall algebras.

This is a joint work with Eric Vasserot.