

## A one-day workshop on Enumerative Geometry and Geometric Representation Theory

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# Quantum toroidal algebras, affine Yangians and abelian qKZ equations

*Wednesday, December 10, 2025 3:00 PM (1 hour)*

In this talk, I will present the construction of abelian meromorphic R-matrices for quantum toroidal algebras, providing a meromorphic braiding on category O representations with respect to the (rational) tensor product induced by Drinfeld coproduct. I will then explain how, under the equivalence of Gautam and Toledano Laredo, these R-matrices compute the monodromy of the abelian qKZ equations for the corresponding affine Yangians. This is based on joint work with S. Gautam.

**Presenter:** APPEL, Andrea (Università degli Studi di Parma)