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**Anna Beliakova\*** ([anna@math.uzh.ch](mailto:anna@math.uzh.ch)), University of Zurich, Institute of Mathematics, Winterthurerstr. 190, 8057 Zurich, Switzerland, and **Kazuo Habiro**. *Categorification of the ribbon element in quantum  $sl(2)$ .*

Witten-Reshetikhin-Turaev invariants of any homology 3-sphere at all roots of unity are dominated by a certain generating function - called a unified invariant, which takes its values in the Habiro ring. This ring is a cyclotomic completion of the polynomial ring in one variable with integral coefficients.

In the talk we provide evidence to the fact that the unified invariants are more natural objects for categorification than the original invariants. A categorification program for unified invariants is based on a categorification of the universal  $sl(2)$  link invariant. For a knot this invariant belongs to the center of quantum  $sl(2)$ .

Together with K. Habiro we recently made a crucial step towards a categorification of the universal R-matrix. We constructed an unbounded bicomplex which belongs to the Drinfeld center of the Khovanov-Lauda 2-category, whose Euler characteristic is the ribbon element of quantum  $sl(2)$ . (Received September 16, 2013)