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Cristina Ana-Maria Palmer-Anghel* (cristina.palmer-anghel@unige.ch). *Coloured Jones and Alexander polynomials unified through Lagrangian intersections in configuration spaces.*

The theory of quantum invariants started with the Jones polynomial and continued with the Reshetikhin-Turaev algebraic construction of link invariants. In this context, the quantum group $U_q(sl(2))$ leads to the sequence of coloured Jones polynomials, which contains the original Jones polynomial. Dually, the quantum group at roots of unity gives the sequence of coloured Alexander polynomials. We construct a unified topological model for these two sequences of quantum invariants. More specifically, we define certain homology classes given by Lagrangian submanifolds in configuration spaces. Then, we prove that the N^{th} coloured Jones and N^{th} coloured Alexander invariants come as different specialisations of a state sum (defined over 3 variables) of Lagrangian intersections in configuration spaces. As a particular case, we see both Jones and Alexander polynomials from the same intersection pairing in a configuration space. (Received September 10, 2021)