A connection problem for linear q-difference equations related to the q-Painlevé VI equation

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Abstract: For the continuous Painlevé equations, character varieties, which are cubic surfaces satisfied by monodromy invariants, play an important role to study nonlinear connection problems. In this talk, we show a q-analogue of a character variety for the q-Painlevé VI equation found by Jimbo and Sakai. We show a weak Riemann-Hilbert correspondence for q-linear equations, in the sense of G. D. Birkoff.

This is a joint work with Jean-Pierre Ramis and Jacques Sauloy in Toulouse.