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TBA

Lundi 2 Mars 2020, 14 :00
IHES, Centre de conférences Marilyn et James Simons(Séminaire Géométrie et Quantification)
Domaines : math

Titre : *Diagrams, Nonabelian Hodge Spaces and Global Lie Theory*

Orateur : **Philip Boalch (Paris Diderot)**

Résumé : *Whereas the exponential map from a Lie algebra to a Lie group can be viewed as the monodromy of a singular connection A dz/z on a disk, the wild character varieties are the receptacles for the monodromy data for arbitrary meromorphic connections on Riemann surfaces. This suggests one should think of the wild character varieties (or the full nonabelian Hodge triple of spaces, bringing in the meromorphic Higgs bundle moduli spaces too) as global analogues of Lie groups, and try to classify them. As a step in this direction I'll explain some recent joint work with D. Yamakawa that defines a diagram for any algebraic connection on a vector bundle on the affine line. This generalises the definition made by the speaker in the untwisted case in 2008 in arXiv :0806.1050 Apx. C, related to the « quiver modularity theorem », that a large class of Nakajima quiver varieties arise as moduli spaces of meromorphic connections on a trivial vector bundle the Riemann sphere, proved in the simply-laced case and conjectured in general in op.cit. (published in Pub. Math. IHES 2012), and proved in general by Hiroe-Yamakawa (Adv. Math. 2014). In particular this construction of diagrams yields all the affine Dynkin diagrams of the Okamoto symmetries of the Painlevé equations, and recovers their special solutions upon removing one node. The case of Painlevé 3 caused the most difficulties.*