Exposé du jeudi 04 avril 2013

GEOMETRY OF MODULI SPACES OF MEROMORPHIC CONNECTIONS ON CURVES.

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Résumé : I will start with a quite detailed description of the wild nonabelian Hodge correspondence on curves (established in work with O. Biquard in 2004). This amounts to showing that certain moduli spaces of meromorphic connections on vector bundles on complex curves admit (complete) hyperkahler metrics, and implies that such spaces are naturally diffeomorphic to moduli spaces of stable meromorphic Higgs bundles (i.e. Hitchin integrable systems). This gives a large supply of noncompact complete hyperkahler manifolds and the second part of the talk will describe how some of these new examples fit in to the list of known examples of hyperkahler manifolds constructed earlier in work of Kronheimer, Nakajima and others. In particular there is a class of examples which look like "more transcendental versions" of certain Nakajima quiver varieties, and this yields an approach to classifying such spaces in terms of graphs (i.e. we have a theory of "Dynkin diagrams" for a large class of hyperkahler manifolds).

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1. Les jeudis matin, de 10 h 30 à 11 h 30, salle 004, IRMAR (bâtiment 22), Université de Rennes 1, Campus de Beaulieu