

## Séminaire de mathématique physique



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Poisson-Lie interpretation of trigonometric Ruijsenaars duality

**Résumé :** A geometric interpretation of the duality between two real forms of the complex trigonometric Ruijsenaars-Schneider system is presented. The phase spaces of the systems in duality are viewed as two different models of the same reduced phase space arising from a suitable symplectic reduction of the standard Heisenberg double of  $U(n)$ . The collections of commuting Hamiltonians of the systems in duality are shown to descend from two families of 'free' Hamiltonians on the double which are dual to each other in a Poisson-Lie sense. These results give rise to a major simplification of Ruijsenaars' proof of the crucial symplectomorphism property of the duality map. The talk, based mainly on joint work with C. Klimcik reported in arXiv:0906.4198, will also include a survey of other results and open problems regarding the reduction approach to Ruijsenaars-Schneider type integrable systems.

Jeudi 27 mai à 16 :15 — salle A318, 3ème étage