

Institut Henri Poincaré
11 rue Pierre et Marie Curie, 75231 Paris cedex 05
String Theory in Greater Paris

Rencontres Théoriciennes
“Supergravité, théorie des cordes et théorie M”

Jeudi 10 Fevrier 2011, 10:00

Vladimir Fock

IRMA, Strasbourg

"Cluster varieties, dimers and integrable systems"

We shall discuss a discrete integrable system, introduced by R.Schwartz in terms of elementary planar projective geometry. S. Tabachnikov and V.Ovsienko has shown, that this system is a discrete approximation for the Boussinesq equation. We shall describe the phase space for this system (and for its generalizations) as a cluster variety, namely a very close relative of a Bruhat cell for the loop group. We shall also show, that the set of commuting integrals for this system is generated by a partition function for a dimer model on a hexagonal lattice.

Institut Henri Poincaré, salle 314, 3^{ème} étage

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