Atelier
« Grassmaniennes positives : applications aux systèmes intégrables et aux amplitudes de diffusion super Yang-Mills »
27–31 juillet 2015

Workshop
"Positive Grassmannians: Applications to integrable systems and super Yang-Mills scattering amplitudes"
July 27–31, 2015

Representations of current algebras, CFT characters, and quantum cluster algebras

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I will explain how a particular type of quantum cluster algebra enters into the study of characters of graded tensor products, Demazure modules etc., dimensions of conformal blocks, and finally characters of Wess–Zumino–Witten conformal field theories. The integrable structure of the discrete evolution, after quantization, gives a relation of these characters with with generalized Toda equations and degenerate Macdonald polynomials.

This is joint work with P. Di Francesco.

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