



SPRING SEMESTER 2015

Minerva Foundation Lectures



Philippe Di Francesco

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“Integrable Combinatorics”

Integrability occurs in physical problems with sufficiently many symmetries, and allows for exact, often elegant solutions with deep geometric and algebraic meaning. Such problems often boil down to that of enumerating weighted configurations of particular systems, which can be rephrased in purely combinatorial or probabilistic terms. In these lectures, we review manifestations of integrability in various enumeration problems such as Lorentzian Triangulations, Planar Maps, Alternating Sign Matrices, Domino Tilings, Plane Partitions, Current Algebra Tensor Product Multiplicities, and their interplay with the underlying structure of Cluster Algebra and its quantum deformation.

Time and location:

Monday March 9, 5:30-7:00pm, 507 Math [w/ the Informal Math-Physics seminar]

Tuesday March 10, 5:30-7:00pm, 622 Math

Wednesday March 11, 4:10-6pm, 417 Math (tbc)

Tea will be served at 4:00 pm in the Department of Mathematics Rm 508, 2990 Broadway (at 117th Street)