

SEMPARIS – Séminaires en région parisienne

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Séminaire de physique mathématique

Jeudi 21 Décembre 2017, 11 :00

IPHT, Salle Claude Itzykson, Bât. 774

Domaines : math-ph

Titre : *Geometric recursion*

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Résumé : *I will present a new formalism, which takes as input a functor E from a category of surfaces with their mapping classes as morphisms, to a category of topological vector spaces, together with glueing operations, as well as a small amount of initial data, and produces as output functorial assignments $S \mapsto \Omega_S$ in $E(S)$. This construction is done by summing over all excisions of homotopy class of pair of pants decompositions of S , and we call it “geometric recursion”. The topological recursion of Eynard and Orantin appears as a projection of the geometric recursion when $E(S)$ is chosen to be the space of continuous functions over the Teichmuller space of S , valued in a Frobenius algebra – and the projection goes via integration over the moduli space. More generally, the geometric recursion aims at producing all kinds of mapping class group invariant quantities attached to surfaces.*

This is based on joint work with J.E. Andersen and N. Orantin.
