ID de Contribution: **21**   Type: **Invited talk**

Bijective proof of Hurwitz formula

jeudi 11 juin 2015 09:30 (45 minutes)

In 1891, Hurwitz gives a formula for the number of some branched coverings of the sphere by itself, corresponding to transitive (m)-tuples of transpositions such that their product has a prescribed cycle type. I will present a combinatorial proof of this quite simple formula, reminiscent of combinatorial constructions for planar maps. This proof explains in particular why, as formulas for planar maps involve numbers of plane trees (aka Catalan trees), Hurwitz formula involves the number of Cayley trees, a fact that the many previous proofs of the formula do not explain. Moreover, the construction can be extended to a more general setting, leading to results about double Hurwitz numbers of any genus.

This is a joint work with Enrica Duchi and Gilles Schaeffer.

Auteur principal: POULALHON, Dominique (LIAFA, Université Paris Diderot)

Orateur: POULALHON, Dominique (LIAFA, Université Paris Diderot)