

A master bijection for planar maps

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007 Kemeny Hall, 4:00 pm
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Abstract

Planar maps are embeddings of connected planar graphs in the plane considered up to continuous deformation. We will present a “master bijection” for planar maps and show that it can be specialized in various ways in order to handle several families of maps. More precisely, for each integer d we obtain a bijection between the family of maps of girth d and a family of decorated plane trees. This gives counting results for maps of girth d counted according to the degree distribution of their faces. Our approach unifies and extends several known bijections.

This is joint work with Eric Fusy.

This talk should be accessible to graduate students