Du
02
DÉC.
2022

14h00
-
16h00

GROUPE DE TRAVAIL "TRANSCENDANCE ET COMBINATOIRE"

On the algebraicity of solutions of functional equations with one catalytic variable (part II)

Institut Henri Poincaré
salle 421
11 Rue Pierre et Marie Curie, 75005 Paris

INSCRIPTION

ABSTRACT: Functional equations with one catalytic variable naturally appear in enumerative combinatorics (e.g. when counting planar maps, walks,...). The relevant solution of such an equation is a formal power series with polynomial coefficients in what is called the catalytic variable. Classifying the nature of this solution (e.g. algebraic, D-finite,...) has been an important topic of research since the 60's, starting with the works of Brown and Tutte. In 2006, Bousquet-Mélou and Jehanne obtained a general theorem giving the algebraicity of those solutions. In this talk, I will first briefly reintroduce the combinatorial context and Bousquet-Mélou and Jehanne's result and I will then present links with Artin's approximation theory and Popescu's theorem. I will finally state and prove a recent effective result by Buchacher and Kauers for the algebraicity of the solutions of linear systems of DDEs.

URL de la page : https://www.ihp.fr/fr/agenda/algebraicity-solutions-functional-equations-one-catalytic-variable-part-ii

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de 9h30 à 17h30,
• samedi de 10h à 18h,
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