

Joint Seminar: "Geometry&Physics"-DFT (IFIN-HH) and "Geometry"-IMAR
([Geometry&Physics Homepage](#)) ([Geometry Homepage](#))

Seminar organizers: Mirela Babalic (NIPNE) & Sergiu Moroianu (IMAR)

Zoom link: <https://us02web.zoom.us/j/891199217919>

Date: Wednesday, Feb. 9, 2021, 10:00 Bucharest time (8:00 GMT)

Title: **The Combinatorics of Plane Curve Singularities**

Speaker: **Patrick Popescu-Pampu** (Lille University)

Abstract: Ever since Newton introduced the first combinatorial object in the study of singularities of plane curves, later called the "Newton polygon", several trees – i.e. connected graphs without cycles – were introduced in order to completely encode the combinatorial structure of such a singularity. I will explain how, starting from some Newton polygons associated to a deeper and deeper "microscopic" study of the initial singularity, one can construct a special simplicial bidimensional complex – a lotus – in which all these trees embed. One can thus visualize the relations between all of them simultaneously, in contrast with the previous situation, in which there existed only algorithms relating two such trees. My talk will consist of an introduction to the first chapter of "Handbook of Geometry and Topology of Singularities I", recently written in collaboration with Evelia Garcia Barroso and Pedro Gonzalez Perez.