

Seminar: "Geometry&Physics" organized by DFT (IFIN-HH) at IMAR
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Location: seminar room 306-307, IMAR, Bucharest

Date: Friday, February 26, 2016, 1:00 PM

Title: **Fiber-dependent deautonomisation of integrable mappings and new discrete Painleve equations**

Speaker: **Dr. Stefan CARSTEA** (DFT, IFIN-HH)

Abstract: "Integrable mappings on the projective plane can be lifted by blow-ups to automorphisms of rational elliptic surfaces preserving an elliptic fibration (which actually gives the invariant). We want to deautonomize these mappings by allowing blow-up points to move. Because we have many singular fibers, the anticanonical divisor can be decomposed in many ways, and accordingly, many root subsystems of E_8 inside the Picard lattice can appear. Expressing the mappings in terms of the elementary reflections of these root subsystems, provides new discrete Painlevé equations (as translations in the corresponding affine Weyl groups)."