Enumeration of hypermaps and Hirota equations for extended rationally constrained KP

Guido Carlet

Université de Bourgogne

We review our recent work on the derivation of the Hirota and Lax equations for the integrable hierarchies of topological type associated with the family of Hurwitz Frobenius manifolds on the space of meromorphic functions on the Riemann sphere with two poles of order 1 and N-1. After sketching the Givental-Milanov-Tseng scheme employed in their derivation, we discuss the (partial) enumerative meaning of the topological tau function and the problems related with the construction of Lax equations for the extended flows. Based on joint work with van de Leur, Posthuma and Shadrin.