

Mutations, cluster reductions and Painleve equations

Thursday, July 7, 2022 2:30 PM (1 hour)

We consider the cluster integrable systems and their invariances, generated by mutations of quivers, induced by intersection forms on base and dual Goncharov-Kenyon surfaces. This leads to natural extension of the Goncharov-Kenyon class of cluster integrable systems by their Hamiltonian reductions. In particular, it allows to fill the gap in cluster construction of the q -difference Painleve equations, corresponding to the self-dual systems in the above sense, and related with the 5d supersymmetric gauge theories.

Based on joint work with M.Bershtein, P.Gavrylenko and M.Semenyakin.

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