

# **Analytic representation of potential vector fields and isomonodromic tau functions**

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In a joint work with M. Kato and J. Sekiguchi, we introduced flat coordinates and potential vector fields on the space of variables of isomonodromic deformations of an Okubo system. A potential vector field satisfies the extended WDVV equation, which is a generalization of the fact that a prepotential of a Frobenius manifold is a solution to the WDVV equation.

In this talk, we study analytic solutions to the (extended) WDVV equation. As its consequence, we find an analytic representation of  $\tau$  functions attached to solutions to the sixth Painlevé equation in terms of flat coordinates.