Rinat Kashaev: Quantum Teichmuller theory and TQFT

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11:14 PM

Joint w/ Andersen.

$\hat{T}: \mathcal{H} \to \mathcal{H} \qquad \mathcal{H} = L^2(\mathbb{R}^2)$

Solves

$$\hat{T}_{12}\hat{T}_{13}\hat{T}_{23} = \hat{T}_{23}\hat{T}_{12} \qquad \text{in } L^2(\mathbb{R}^3)$$

$$\hat{T}\psi = e^{2\pi i \hat{P}_1 \hat{q}_2}\psi(\hat{q}_1 - \hat{q}_2 + \hat{P}_2)$$

where $\hat{q}_k f = x_k f$

$$\hat{P}_k f = \frac{1}{2\pi i}\frac{\partial}{\partial x_k} f$$

we need to describe ψ ...

$$\psi(x) = \frac{1}{\Phi_\hbar(x)} \qquad \Phi_\hbar(x) = \ldots$$

Faddeev's quantum dilogarithm.