

Generalisation of Teichmueller space

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The quantization of the Teichmueller spaces of Riemann surfaces has found important applications to conformal field theory and N=2 supersymmetric gauge theories. The aim of the talk is to construct generalizations of the quantum Teichmueller theory which would, in particular, describe the quantum theory of the Teichmueller spaces of Super-Riemann surfaces.

The starting point of the project was the observation that the quantum Teichmueller theory can be build combinatorially from a simple quantum group, a deformation of the Borel half of $SL(2)$. The idea is to replace the (quantum) group $SL(2)$ by a suitable quantum super-group. The result is to demonstrate that the resulting quantum theory is nothing but the quantum theory of the Teichmueller spaces of Super-Riemann surfaces."

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