

Hyperkähler structure on the space of quasi-Fuchsian representations

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Let G be the fundamental group of a compact Riemannian surface S . The space X of irreducible $SL(2, \mathbb{C})$ -representations of G is equipped with a hyperkahler structure, constructed by Hitchin. This hyperkaehler structure a priori depends on the complex structure of S . Interpreting X as "higher Teichmuller space", V. Fock predicted that this hyperkahler structure is in fact independent from the choice of the complex structure on S . I would explain how this conjecture can be proved, using the functoriality of Kaledin-Feix construction of a hyperkahler structure in a neighbourhood of a Kahler manifold in its cotangent space.