

Top terms of polynomial traces in Kra's plumbing construction.

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(Joint work with Caroline Series)

Given a surface Σ , Kra's plumbing construction endows Σ with a projective structure for which the associated holonomy representation ρ depends on the 'plumbing parameters' $\tau_i \in \mathbb{C}$. In particular, the trace $\text{Tr}(\rho(\gamma))$, $\gamma \in \pi_1(\Sigma)$, is a polynomial in the τ_i . Our result is a description of the two highest order terms of this polynomial. After reviewing the definition of the Dehn-Thurston coordinates for simple closed curves and of Kra's construction, explain our combinatorial proof of the trace formula.