Info

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Space of Schottky groups

Definition. Space of ultra-Schottky groups

$$
\begin{aligned}
X_g &:= \left\{ \langle A_1, \dots, A_g \rangle \in \mathrm{HomGrp}(F_g, PSL(2)(\mathbb{C})) \,\middle|\, \left| \bigcup_{1 \le k \le g} \mathrm{fix}(A_k) \right| \ge 3 \right\} \\
&= PSL(2)(\mathbb{C})^g \setminus Z(\dots) \\
Y_g &:= {}_{PSL(2,\mathbb{C})}\backslash^{X_g}
\end{aligned}
$$

Let

$$S_g \subset Y_g$$

be the space of ultra-Schottky groups and

$$S_g^{\text{classical}} \subset S_g$$

be the space of classical ultra-Schottky groups.

Y_g is a connected $\mathbb{C}$-manifold of dimension $3g - 3$.

S_g is a open and connected subset of Y_g.

The boundary

$$\partial S_g$$

consists of free, discrete groups that are ***not*** Schottky.
∂S_g contains a group with parabolic elements. It also contains a group of purely hyperbolic-type, which must have $\Lambda = S^2$.

$$\mathrm{intRepDF}(F_g, PSL(2)(\mathbb{C})) = S_g$$

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- stem
  - Objects stemming from $PSL(2)(\mathbb{C})$
    - Kleinian groups $\Gamma <_d PSL(2)(\mathbb{C})$ ↔ Hyperbolic 3-manifolds/orbifolds ${}_\Gamma\backslash^{\mathbb{R}\boldsymbol{H}^3}$
      - Kleinian ultra-Schottky groups ↔ convex cocompact hyperbolic interior of 3-handlebodies
        - Space of Schottky groups

And it has 1 siblings.

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