Sullivan's Dictionary.

Kleinian groups $\longleftrightarrow$ Complex Dynamics
(of Möbius transformations)

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JFF: What fun pictures can be drawn in a disk minus 3-disks? Such red pictures could be möbiused around for fun & beauty.
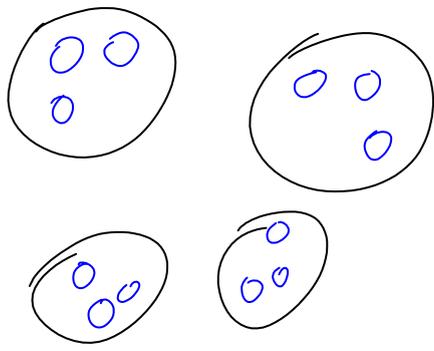
$G = $ reflections on black circles.

Example

What if the circles touch each other:
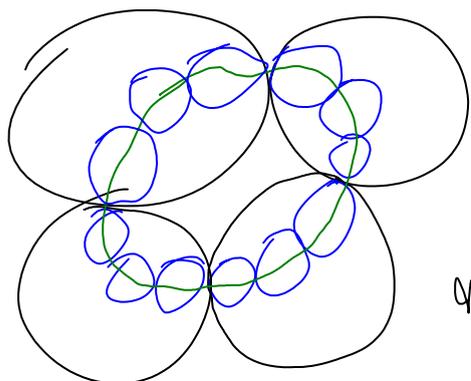
The limit set is a quasi-circle. H-dim >1, quasi-conf image of a circle.

Frostman's Theorem. (imprecise)

A set has high H-dim iff it supports a measure whose volume on small balls is small.

Teichmüller Space.

$\mathcal{T} = \{$marked Riemann surfaces$\}$

$\downarrow$ covering w/ group = mapping class group.

$m_{\downarrow} = \{$Riemann surfaces$\} / $ conf. equiv.

Bers Theorem on simult. uniformization

$f: \mathbb{R} \xrightarrow{\text{homeo}} S \Rightarrow \exists$ group Γ_S and a

curve γ_S

dividing the sphere

to two components, s.t.

$H^+/\Gamma = \mathbb{R}, \quad H^-/\Gamma = S$

Schwarzian.

$$Sf = \left[\left(\frac{f''}{f'}\right)' - \frac{1}{2}\left(\frac{f''}{f'}\right)^2\right] dz^2$$

annihilates Möb trans & only them.

$$S\psi_S: \mathcal{T} \longrightarrow \text{quadratic differentials} \subset \mathbb{C}^{3g-3}$$

So $\mathcal{T}$ has a complex structure.

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