Info

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is written (completely with human hands) by Rupadarshi Ray,
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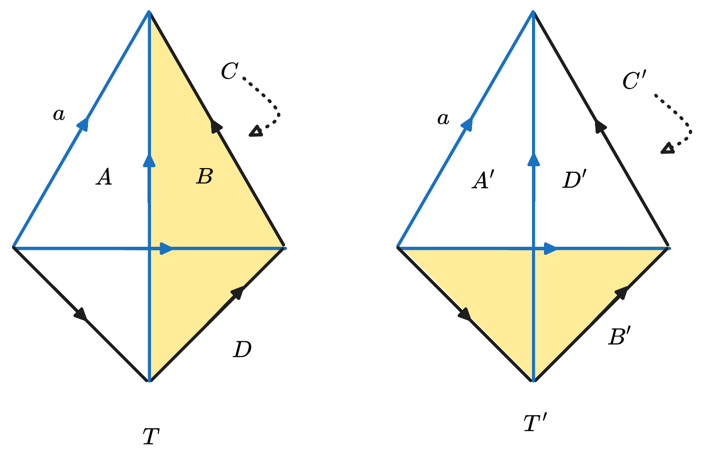
Complement of the figure 8 knot in S^3

Definition. Definition



Let $S \in \{A, B, C, D\}$ be a face of T and

$$f_S : T' \to T \in \mathrm{Isom}(\mathbb{R}\boldsymbol{H}^3)$$

be the unique orientation reversing isometry that maps

$$S \mapsto S'$$

Let g_S be f_S followed by a reflection in the side S. Then

$$\{g_A, g_B, g_C, g_D, g_A^{-1}, g_B^{-1}, g_C^{-1}, g_D^{-1}\}$$

form a side pairing for T, T'. We consider the orientable hyperbolic 3-manifold

$$\frac{T \sqcup T'}{g_A, g_B, g_C, g_D, g_A^{-1}, g_B^{-1}, g_C^{-1}, g_D^{-1}}$$

```
import snappy
M = snappy.Manifold("m004")
print("Link complement of ",snappy.LinkExteriors.identify(M))
print("Is orientable: ",M.is_orientable())
print("Is hyperbolic:", M.solution_type())
# print(M.alexander_polynomial())
print("Volume:", M.volume())

T= snappy.Triangulation(M)
print(T.num_tetrahedra())
print(T.gluing_equations())

print("Fundamental group presentation:")
G =
M.fundamental_group(minimize_number_of_generators=True,simplify_presentat
ion=True)
print(G)
for i in 'abcd':
    print(i,G.SL2C(i))
print(M.dirichlet_domain())
# M.dirichlet_domain().view()
print("Homology: ",M.homology())

# print(M.identify())
# print(M.length_spectrum(0.75, include_words=True))
```

[1]

Current note has 0 direct children and 0 total descendants.

- stretchy
  - Figure 8 knot
    - Complement of the figure 8 knot in S^3

And it has 1 siblings.

- stretchy
  - Figure 8 knot
    - Complement of the figure 8 knot in S^3

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1. John G. Ratcliffe - Foundations of Hyperbolic Manifolds (2019), p.447 ↩