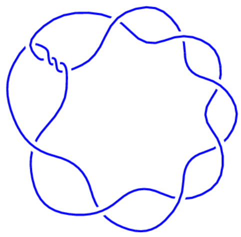
$11a_{342}$ $(K11a_{342})$



[1]

Arc Sequences

$\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow\downarrow\rightarrow$

7 8 1 11 10 9 2 3 6 5 4

Solving Sequence

$$3{,}8 \underset{c_8}{\longrightarrow} 9 \underset{c_2}{\longrightarrow} 2 \underset{c_7}{\longrightarrow} 7 \underset{c_1}{\longrightarrow} 1 \underset{c_3}{\longrightarrow} 4 \underset{c_6}{\longrightarrow} 6 \underset{c_9}{\longrightarrow} 10 \underset{c_5}{\longrightarrow} 5 \underset{c_{11}}{\longrightarrow} 11 \gg c_4, c_{10}$$

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{14} - u^{13} - 7u^{12} + 6u^{11} + 18u^{10} - 11u^9 - 21u^8 + 4u^7 + 14u^6 + 2u^5 - 10u^4 + 4u^3 + 4u^2 + u - 1\rangle$$

There are 1 irreducible components with 14 representations.

[1] The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I. $\boldsymbol{I_1^u = \langle u^{14} - u^{13} - 7u^{12} + 6u^{11} + 18u^{10} - 11u^9 - 21u^8 + 4u^7 + 14u^6 + 2u^5 - 10u^4 + 4u^3 + 4u^2 + u - 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_7 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^2+1\\u^4-2u^2\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-u^6+3u^4-2u^2+1\\u^8-4u^6+4u^4\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u^5+2u^3+u\\u^5-3u^3+u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u^9+4u^7-3u^5-2u^3-u\\u^9-5u^7+7u^5-2u^3+u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u^{13}+6u^{11}-11u^9+4u^7+2u^5+4u^3+u\\u^{13}-7u^{11}+17u^9-16u^7+6u^5-5u^3+u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-u^{10}+5u^8-8u^6+5u^4-3u^2+1\\u^{12}-6u^{10}+12u^8-8u^6+u^4-2u^2\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-u^{10}+5u^8-8u^6+5u^4-3u^2+1\\u^{12}-6u^{10}+12u^8-8u^6+u^4-2u^2\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.49695 - 0.18035I$	$1.39190 - 4.86264I$	$-8.09843 + 3.43305I$
$u = -1.49695 + 0.18035I$	$1.39190 + 4.86264I$	$-8.09843 - 3.43305I$
$u = -1.49303$	-6.81823	-15.6260
$u = -0.518193 - 0.710823I$	$19.6027 - 2.3762I$	$-4.40255 + 2.72640I$
$u = -0.518193 + 0.710823I$	$19.6027 + 2.3762I$	$-4.40255 - 2.72640I$
$u = -0.414981 - 0.387561I$	$1.33933 - 1.36693I$	$-5.43833 + 6.34895I$
$u = -0.414981 + 0.387561I$	$1.33933 + 1.36693I$	$-5.43833 - 6.34895I$
$u = \quad 0.375035$	-0.527184	-19.1440
$u = \quad 0.482562 - 0.605765I$	$7.86080 + 2.05217I$	$-4.38288 - 3.48878I$
$u = \quad 0.482562 + 0.605765I$	$7.86080 - 2.05217I$	$-4.38288 + 3.48878I$
$u = \quad 1.48710 - 0.08735I$	$-4.92622 + 2.93973I$	$-10.63366 - 4.87049I$
$u = \quad 1.48710 + 0.08735I$	$-4.92622 - 2.93973I$	$-10.63366 + 4.87049I$
$u = \quad 1.51945 - 0.23865I$	$12.9478 + 5.8388I$	$-7.65915 - 2.72028I$
$u = \quad 1.51945 + 0.23865I$	$12.9478 - 5.8388I$	$-7.65915 + 2.72028I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_2, c_7 c_8	$(u^{14} + u^{13} + \cdots - u - 1)$
c_3, c_4, c_5 c_6, c_9, c_{10} c_{11}	$(u^{14} + u^{13} + \cdots + u - 1)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_2, c_7 c_8	$(y^{14} - 15y^{13} + \cdots - 9y + 1)$
c_3, c_4, c_5 c_6, c_9, c_{10} c_{11}	$(y^{14} + 21y^{13} + \cdots - 9y + 1)$