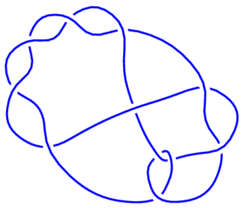
$11a_{203}$ ($K11a_{203}$)



[1]

Arc Sequences

$\longrightarrow \underset{6}{\downarrow} \longrightarrow \underset{1}{\downarrow} \longrightarrow \underset{9}{\downarrow} \longrightarrow \underset{10}{\downarrow} \longrightarrow \underset{8}{\downarrow} \longrightarrow \underset{2}{\downarrow} \longrightarrow \underset{11}{\uparrow} \longrightarrow \underset{3}{\downarrow} \longrightarrow \underset{4}{\downarrow} \longrightarrow \underset{5}{\downarrow} \longrightarrow \underset{7}{\uparrow} \longrightarrow$

Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{2} I_i^u$$

$$I_1^u = \langle u - 1 \rangle$$
$$I_2^u = \langle u^{30} - 8u^{28} + \cdots + u + 1 \rangle$$

There are 2 irreducible components with 31 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. $I_1^u = \langle u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

(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
$u = \ \ 1.00000$	-4.93480	-18.0000

II. $I_2^u = \langle u^{30} - 8u^{28} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^4 - u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^7 + 2u^5 - 2u^3 \\ u^7 - u^5 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{13} - 4u^{11} + 7u^9 - 6u^7 + 2u^5 - u \\ -u^{15} + 3u^{13} - 4u^{11} + u^9 + 2u^7 - 2u^5 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{24} - 7u^{22} + \cdots - 2u^2 + 1 \\ -u^{26} + 6u^{24} + \cdots - 3u^6 + u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{15} - 4u^{13} + 8u^{11} - 8u^9 + 4u^7 \\ -u^{15} + 3u^{13} - 4u^{11} + u^9 + 2u^7 - 2u^5 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{26} + 7u^{24} + \cdots - u^2 + 1 \\ u^{26} - 6u^{24} + \cdots + 3u^6 - u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{26} + 7u^{24} + \cdots - u^2 + 1 \\ u^{26} - 6u^{24} + \cdots + 3u^6 - u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.236338 - 0.392586I$	$-19.1575 + 1.1230I$	$-17.1562 + 0.4196I$
$u = -1.236338 + 0.392586I$	$-19.1575 - 1.1230I$	$-17.1562 - 0.4196I$
$u = -1.198878 - 0.495938I$	$-8.40726 - 8.70507I$	$-15.2295 + 7.1454I$
$u = -1.198878 + 0.495938I$	$-8.40726 + 8.70507I$	$-15.2295 - 7.1454I$
$u = -1.175618 - 0.433898I$	$-4.54064 - 2.58760I$	$-11.91074 - 0.31463I$
$u = -1.175618 + 0.433898I$	$-4.54064 + 2.58760I$	$-11.91074 + 0.31463I$
$u = -1.09884$	-14.6811	-17.7745
$u = -0.887519 - 0.482432I$	$-1.82016 - 4.25744I$	$-10.93711 + 7.73976I$
$u = -0.887519 + 0.482432I$	$-1.82016 + 4.25744I$	$-10.93711 - 7.73976I$
$u = -0.633476$	-0.803448	-13.1113
$u = -0.551842 - 0.441212I$	$-0.931280 + 0.302386I$	$-8.66690 - 0.70064I$
$u = -0.551842 + 0.441212I$	$-0.931280 - 0.302386I$	$-8.66690 + 0.70064I$
$u = -0.100894 - 0.796851I$	$-5.17949 + 3.97369I$	$-12.30033 - 4.02503I$
$u = -0.100894 + 0.796851I$	$-5.17949 - 3.97369I$	$-12.30033 + 4.02503I$
$u = 0.064904 - 0.715291I$	$-1.08394 - 1.47244I$	$-7.45106 + 4.26447I$
$u = 0.064904 + 0.715291I$	$-1.08394 + 1.47244I$	$-7.45106 - 4.26447I$
$u = 0.113847 - 0.839746I$	$-15.0478 - 5.3499I$	$-12.97012 + 2.66295I$
$u = 0.113847 + 0.839746I$	$-15.0478 + 5.3499I$	$-12.97012 - 2.66295I$
$u = 0.523957 - 0.596828I$	$-9.71958 - 0.79768I$	$-9.60193 - 0.22241I$
$u = 0.523957 + 0.596828I$	$-9.71958 + 0.79768I$	$-9.60193 + 0.22241I$
$u = 0.778482 - 0.436098I$	$1.00011 + 1.87364I$	$-3.05909 - 5.26127I$
$u = 0.778482 + 0.436098I$	$1.00011 - 1.87364I$	$-3.05909 + 5.26127I$
$u = 0.935013 - 0.538460I$	$-10.87340 + 5.27966I$	$-12.05604 - 5.65823I$
$u = 0.935013 + 0.538460I$	$-10.87340 - 5.27966I$	$-12.05604 + 5.65823I$
$u = 1.178599 - 0.472961I$	$-4.25686 + 5.88582I$	$-10.73071 - 7.02338I$
$u = 1.178599 + 0.472961I$	$-4.25686 - 5.88582I$	$-10.73071 + 7.02338I$
$u = 1.209451 - 0.403071I$	$-9.06454 + 0.14928I$	$-16.5343 + 0.4492I$
$u = 1.209451 + 0.403071I$	$-9.06454 - 0.14928I$	$-16.5343 - 0.4492I$
$u = 1.212991 - 0.509772I$	$-18.3208 + 10.2613I$	$-15.9531 - 5.7696I$
$u = 1.212991 + 0.509772I$	$-18.3208 - 10.2613I$	$-15.9531 + 5.7696I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_6	$(u+1)(u^{30} - 8u^{28} + \cdots - u + 1)$
c_2	$(u+1)(u^{30} + 16u^{29} + \cdots + 3u + 1)$
c_3, c_4, c_8 c_9, c_{10}	$(u+1)(u^{30} - 20u^{28} + \cdots - 3u + 1)$
c_5	$(u-1)(u^{30} + 6u^{29} + \cdots - 23u + 41)$
c_7, c_{11}	$(u)(u^{30} + 3u^{29} + \cdots - 37u - 11)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y-1)(y^{30} - 16y^{29} + \cdots - 3y + 1)$
c_2	$(y-1)(y^{30} - 4y^{29} + \cdots - 7y + 1)$
c_3, c_4, c_8 c_9, c_{10}	$(y-1)(y^{30} - 40y^{29} + \cdots - 3y + 1)$
c_5	$(y-1)(y^{30} - 16y^{29} + \cdots - 36527y + 1681)$
c_7, c_{11}	$(y)(y^{30} + 27y^{29} + \cdots - 3129y + 121)$