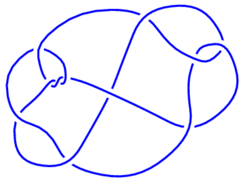
$11a_{192}$ ($K11a_{192}$)



[1]

Arc Sequences

$$\to\downarrow_{6}\to\downarrow_{1}\to\downarrow_{10}\to\downarrow_{9}\to\downarrow_{7}\to\downarrow_{2}\to\downarrow_{3}\to\downarrow_{11}\to\downarrow_{4}\to\downarrow_{5}\to\downarrow_{8}\to$$

Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{48} + u^{47} + \cdots + 4u^2 - 1 \rangle$$

There are 1 irreducible components with 48 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. $I_1^u = \langle u^{48} + u^{47} + \cdots + 4u^2 - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^7 - 2u^5 + 2u^3 - 2u \\ -u^9 + u^7 - u^5 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{14} - 3u^{12} + 6u^{10} - 9u^8 + 8u^6 - 6u^4 + 2u^2 + 1 \\ -u^{16} + 2u^{14} - 4u^{12} + 4u^{10} - 2u^8 + 2u^4 - 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{21} - 4u^{19} + \cdots + 2u^3 - 3u \\ -u^{23} + 3u^{21} + \cdots + 2u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{47} - 8u^{45} + \cdots - 18u^5 + 10u^3 \\ -u^{47} - u^{46} + \cdots - 4u^2 + 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{22} + 3u^{20} + \cdots + 2u^2 + 1 \\ u^{22} - 4u^{20} + \cdots + 2u^4 - 3u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{22} + 3u^{20} + \cdots + 2u^2 + 1 \\ u^{22} - 4u^{20} + \cdots + 2u^4 - 3u^2 \end{pmatrix}$$

(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
$u = -1.005798 - 0.748763I$	$11.2407 - 13.2008I$	$-4.69604 + 8.20742I$
$u = -1.005798 + 0.748763I$	$11.2407 + 13.2008I$	$-4.69604 - 8.20742I$
$u = -1.004247 - 0.197756I$	$-0.68024 - 4.58900I$	$-13.6527 + 7.1281I$
$u = -1.004247 + 0.197756I$	$-0.68024 + 4.58900I$	$-13.6527 - 7.1281I$
$u = -0.984346 - 0.747272I$	$5.67693 - 5.57732I$	$-6.94459 + 2.40000I$
$u = -0.984346 + 0.747272I$	$5.67693 + 5.57732I$	$-6.94459 - 2.40000I$
$u = -0.982394$	-4.36789	-20.8284
$u = -0.977276 - 0.681640I$	$3.84600 - 8.17225I$	$-8.45707 + 8.28509I$
$u = -0.977276 + 0.681640I$	$3.84600 + 8.17225I$	$-8.45707 - 8.28509I$
$u = -0.969812 - 0.290267I$	$5.75150 + 1.80433I$	$-8.37889 + 0.64615I$
$u = -0.969812 + 0.290267I$	$5.75150 - 1.80433I$	$-8.37889 - 0.64615I$
$u = -0.908318 - 0.607143I$	$2.32852 - 2.32135I$	$-10.38591 + 2.77129I$
$u = -0.908318 + 0.607143I$	$2.32852 + 2.32135I$	$-10.38591 - 2.77129I$
$u = -0.863433 - 0.671565I$	$2.01219 - 2.59814I$	$-6.70685 + 3.63850I$
$u = -0.863433 + 0.671565I$	$2.01219 + 2.59814I$	$-6.70685 - 3.63850I$
$u = -0.750738 - 0.818055I$	$6.39491 - 0.29411I$	$-5.62712 + 2.80614I$
$u = -0.750738 + 0.818055I$	$6.39491 + 0.29411I$	$-5.62712 - 2.80614I$
$u = -0.726260 - 0.838751I$	$12.09985 + 7.26678I$	$-3.13252 - 3.28758I$
$u = -0.726260 + 0.838751I$	$12.09985 - 7.26678I$	$-3.13252 + 3.28758I$
$u = -0.687005 - 0.705958I$	$4.69521 + 2.82559I$	$-6.42254 - 2.96931I$
$u = -0.687005 + 0.705958I$	$4.69521 - 2.82559I$	$-6.42254 + 2.96931I$
$u = -0.321214 - 0.453052I$	$3.24763 - 1.60907I$	$-6.12064 + 4.01987I$
$u = -0.321214 + 0.453052I$	$3.24763 + 1.60907I$	$-6.12064 - 4.01987I$
$u = -0.052937 - 0.663054I$	$8.65974 - 4.98357I$	$-2.57496 + 3.43258I$
$u = -0.052937 + 0.663054I$	$8.65974 + 4.98357I$	$-2.57496 - 3.43258I$
$u = 0.035513 - 0.617174I$	$2.62424 + 1.94253I$	$-5.82906 - 3.77516I$
$u = 0.035513 + 0.617174I$	$2.62424 - 1.94253I$	$-5.82906 + 3.77516I$
$u = 0.390764$	-0.601903	-16.4765
$u = 0.731389 - 0.825033I$	$6.02949 - 3.89902I$	$-6.63992 + 3.50313I$
$u = 0.731389 + 0.825033I$	$6.02949 + 3.89902I$	$-6.63992 - 3.50313I$

	Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u =$	$0.742608 - 0.631933I$	$0.1388915 + 0.0056976I$	$-12.76408 + 1.77198I$
$u =$	$0.742608 + 0.631933I$	$0.1388915 - 0.0056976I$	$-12.76408 - 1.77198I$
$u =$	$0.765161 - 0.831752I$	$12.80673 + 3.15758I$	$-2.24302 - 2.74942I$
$u =$	$0.765161 + 0.831752I$	$12.80673 - 3.15758I$	$-2.24302 + 2.74942I$
$u =$	$0.870479 - 0.749319I$	$7.96823 + 2.83806I$	$-2.43161 - 2.98157I$
$u =$	$0.870479 + 0.749319I$	$7.96823 - 2.83806I$	$-2.43161 + 2.98157I$
$u =$	$0.940603 - 0.220725I$	$-0.223689 + 0.846659I$	$-12.11040 - 0.46472I$
$u =$	$0.940603 + 0.220725I$	$-0.223689 - 0.846659I$	$-12.11040 + 0.46472I$
$u =$	$0.951082 - 0.661265I$	$-0.50327 + 5.09371I$	$-14.3561 - 6.8355I$
$u =$	$0.951082 + 0.661265I$	$-0.50327 - 5.09371I$	$-14.3561 + 6.8355I$
$u =$	$0.981347 - 0.761736I$	$12.14028 + 2.80062I$	$-3.38890 - 2.38417I$
$u =$	$0.981347 + 0.761736I$	$12.14028 - 2.80062I$	$-3.38890 + 2.38417I$
$u =$	$0.997744 - 0.743909I$	$5.21260 + 9.77857I$	$-8.26482 - 8.48475I$
$u =$	$0.997744 + 0.743909I$	$5.21260 - 9.77857I$	$-8.26482 + 8.48475I$
$u =$	$0.999716 - 0.062266I$	$-0.64228 + 2.86520I$	$-14.6176 - 4.2078I$
$u =$	$0.999716 + 0.062266I$	$-0.64228 - 2.86520I$	$-14.6176 + 4.2078I$
$u =$	$1.031557 - 0.212124I$	$5.16114 + 7.81947I$	$-9.60222 - 6.57989I$
$u =$	$1.031557 + 0.212124I$	$5.16114 - 7.81947I$	$-9.60222 + 6.57989I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_6	$(u^{48} + u^{47} + \cdots + 4u^2 - 1)$
c_2, c_5	$(u^{48} + 15u^{47} + \cdots + 8u + 1)$
c_3, c_4, c_9	$(u^{48} + u^{47} + \cdots - 4u - 1)$
c_7	$(u^{48} + u^{47} + \cdots - 282u - 61)$
c_8, c_{11}	$(u^{48} + 7u^{47} + \cdots + 16u + 1)$
c_{10}	$(u^{48} + u^{47} + \cdots + 198u - 37)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y^{48} - 15y^{47} + \cdots - 8y + 1)$
c_2, c_5	$(y^{48} + 37y^{47} + \cdots - 40y + 1)$
c_3	$(y^{48} + 45y^{47} + \cdots - 8y + 1)$
c_4, c_9	$(y^{48} + 45y^{47} + \cdots - 8y + 1)$
c_7	$(y^{48} + 13y^{47} + \cdots - 22428y + 3721)$
c_8, c_{11}	$(y^{48} + 41y^{47} + \cdots + 200y + 1)$
c_{10}	$(y^{48} + 17y^{47} + \cdots + 24140y + 1369)$