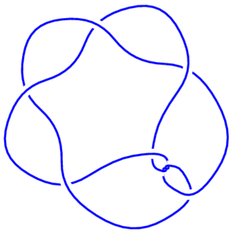
$11a_{335}$ ($K11a_{335}$)



[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 4 5 6

Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{37} - u^{36} + \cdots - 3u + 1 \rangle$$

There are 1 irreducible components with 37 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. $I^u_1 = \langle u^{37} - u^{36} + \cdots - 3u + 1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{12} - 5u^{10} - 9u^8 - 6u^6 + u^2 + 1 \\ -u^{14} - 6u^{12} - 13u^{10} - 10u^8 + 2u^6 + 4u^4 - u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 + 2u \\ u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{10} - 5u^8 - 8u^6 - 3u^4 + 3u^2 + 1 \\ -u^{10} - 4u^8 - 5u^6 + 3u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{27} + 12u^{25} + \cdots - 9u^3 - 2u \\ u^{27} + 11u^{25} + \cdots - 5u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{29} - 12u^{27} + \cdots + 6u^3 + 3u \\ -u^{31} - 13u^{29} + \cdots + 24u^7 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{29} - 12u^{27} + \cdots + 6u^3 + 3u \\ -u^{31} - 13u^{29} + \cdots + 24u^7 + u \end{pmatrix}$$

(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
$u = -0.761012 - 0.145124I$	$-1.30987 - 5.10979I$	$-14.0141 + 6.9625I$
$u = -0.761012 + 0.145124I$	$-1.30987 + 5.10979I$	$-14.0141 - 6.9625I$
$u = -0.741349$	-4.65627	-19.8707
$u = -0.600959 - 0.215194I$	$-6.30817 + 0.50143I$	$-15.7929 + 1.6593I$
$u = -0.600959 + 0.215194I$	$-6.30817 - 0.50143I$	$-15.7929 - 1.6593I$
$u = -0.323260 - 1.352453I$	$3.41113 - 9.03749I$	$-9.15046 + 8.29355I$
$u = -0.323260 + 1.352453I$	$3.41113 + 9.03749I$	$-9.15046 - 8.29355I$
$u = -0.303719 - 1.260876I$	$-0.75596 - 3.77593I$	$-14.9240 + 4.3419I$
$u = -0.303719 + 1.260876I$	$-0.75596 + 3.77593I$	$-14.9240 - 4.3419I$
$u = -0.302108 - 0.618325I$	$-4.95014 - 3.74741I$	$-12.71662 + 4.63648I$
$u = -0.302108 + 0.618325I$	$-4.95014 + 3.74741I$	$-12.71662 - 4.63648I$
$u = -0.261585 - 1.346480I$	$-1.46648 - 2.68282I$	$-10.45967 + 2.37347I$
$u = -0.261585 + 1.346480I$	$-1.46648 + 2.68282I$	$-10.45967 - 2.37347I$
$u = -0.247587 - 1.099148I$	$1.51106 + 1.30299I$	$-11.08606 - 3.41779I$
$u = -0.247587 + 1.099148I$	$1.51106 - 1.30299I$	$-11.08606 + 3.41779I$
$u = -0.044413 - 1.402125I$	$1.30989 - 4.63234I$	$-8.40491 + 3.31398I$
$u = -0.044413 + 1.402125I$	$1.30989 + 4.63234I$	$-8.40491 - 3.31398I$
$u = 0.014593 - 1.395727I$	$7.89022 + 1.99397I$	$-4.51029 - 3.60908I$
$u = 0.014593 + 1.395727I$	$7.89022 - 1.99397I$	$-4.51029 + 3.60908I$
$u = 0.132400 - 0.636798I$	$1.72361 + 1.67469I$	$-8.06184 - 5.20256I$
$u = 0.132400 + 0.636798I$	$1.72361 - 1.67469I$	$-8.06184 + 5.20256I$
$u = 0.209723 - 1.214468I$	$2.54473 + 1.90283I$	$-7.07864 - 3.49708I$
$u = 0.209723 + 1.214468I$	$2.54473 - 1.90283I$	$-7.07864 + 3.49708I$
$u = 0.276289$	-0.504726	-19.7383
$u = 0.303191 - 1.346634I$	$4.15088 + 5.05582I$	$-6.99986 - 2.20493I$
$u = 0.303191 + 1.346634I$	$4.15088 - 5.05582I$	$-6.99986 + 2.20493I$
$u = 0.322667 - 1.080030I$	$-5.73875 - 3.53679I$	$-14.2053 + 1.5505I$
$u = 0.322667 + 1.080030I$	$-5.73875 + 3.53679I$	$-14.2053 - 1.5505I$
$u = 0.338576 - 1.356182I$	$-3.83357 + 11.73380I$	$-12.4832 - 7.0367I$
$u = 0.338576 + 1.356182I$	$-3.83357 - 11.73380I$	$-12.4832 + 7.0367I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.351528 - 1.257024I$	$-8.89081 + 4.15452I$	$-16.1817 - 3.4204I$
$u = 0.351528 + 1.257024I$	$-8.89081 - 4.15452I$	$-16.1817 + 3.4204I$
$u = 0.711095 - 0.138353I$	$-0.53120 + 1.35599I$	$-11.83231 - 0.62165I$
$u = 0.711095 + 0.138353I$	$-0.53120 - 1.35599I$	$-11.83231 + 0.62165I$
$u = 0.792373 - 0.146649I$	$-8.57063 + 7.64850I$	$-17.1130 - 5.4186I$
$u = 0.792373 + 0.146649I$	$-8.57063 - 7.64850I$	$-17.1130 + 5.4186I$
$u = 0.802054$	-12.7836	-20.3610

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_2, c_7 c_8	$(u^{37} + u^{36} + \cdots - u - 1)$
c_3, c_6	$(u^{37} + 7u^{36} + \cdots + u + 7)$
c_4, c_5, c_{10}	$(u^{37} + u^{36} + \cdots - 3u - 1)$
c_9, c_{11}	$(u^{37} + u^{36} + \cdots - 3u + 2)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_2, c_7 c_8	$(y^{37} - 41y^{36} + \cdots + 11y - 1)$
c_3, c_6	$(y^{37} + 19y^{36} + \cdots + 239y - 49)$
c_4, c_5, c_{10}	$(y^{37} + 31y^{36} + \cdots + 11y - 1)$
c_9, c_{11}	$(y^{37} - 21y^{36} + \cdots + 41y - 4)$