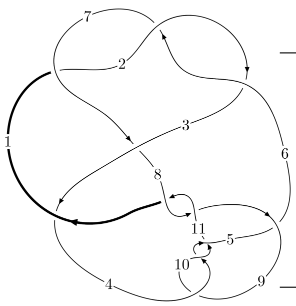
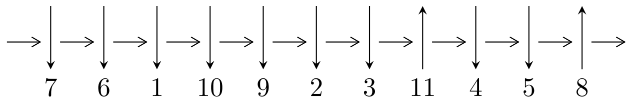
$11a_{309}$ ($K11a_{309}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

Ideals for irreducible components[2] of $X_{\mathbf{par}}$

$$I_1^u = \langle u^{46} + u^{45} + \cdots + u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 46 representations.

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[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $I_1^u = \langle u^{46} + u^{45} + \cdots + u - 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^5 + 2u^3 - u \\ u^7 - 3u^5 + 2u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^4 + u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^8 - 3u^6 + u^4 + 2u^2 + 1 \\ -u^8 + 4u^6 - 4u^4 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{19} + 8u^{17} - 24u^{15} + 30u^{13} - 7u^{11} - 10u^9 - 4u^7 + 6u^5 + 3u^3 + 2u \\ u^{19} - 9u^{17} + 32u^{15} - 55u^{13} + 43u^{11} - 9u^9 - 4u^5 - u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{31} + 14u^{29} + \cdots + 6u^3 + 2u \\ u^{33} - 15u^{31} + \cdots - 4u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{34} - 15u^{32} + \cdots - u^2 + 1 \\ -u^{34} + 16u^{32} + \cdots - 2u^4 - 3u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{34} - 15u^{32} + \cdots - u^2 + 1 \\ -u^{34} + 16u^{32} + \cdots - 2u^4 - 3u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{44} + 84u^{42} + \cdots - 4u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6	$u^{46} + u^{45} + \cdots - 3u - 1$
c_3	$u^{46} - 11u^{45} + \cdots - 95u + 11$
c_4, c_9, c_{10}	$u^{46} - u^{45} + \cdots - u - 1$
c_5	$u^{46} + 3u^{45} + \cdots + 95u + 56$
c_7	$u^{46} - u^{45} + \cdots - 3u - 2$
c_8, c_{11}	$u^{46} + 7u^{45} + \cdots + 119u + 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6	$y^{46} + 41y^{45} + \cdots - 5y + 1$
c_3	$y^{46} + 5y^{45} + \cdots + 2679y + 121$
c_4, c_9, c_{10}	$y^{46} - 43y^{45} + \cdots - 5y + 1$
c_5	$y^{46} - 15y^{45} + \cdots - 63233y + 3136$
c_7	$y^{46} - 3y^{45} + \cdots + 15y + 4$
c_8, c_{11}	$y^{46} + 37y^{45} + \cdots - 1337y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.165530 + 0.155856I$	$3.73352 - 1.14194I$	$-3.26529 + 0.I$
$u = -1.165530 - 0.155856I$	$3.73352 + 1.14194I$	$-3.26529 + 0.I$
$u = \ \ 0.386832 + 0.683926I$	$1.91287 - 9.38652I$	$-5.20305 + 7.91054I$
$u = \ \ 0.386832 - 0.683926I$	$1.91287 + 9.38652I$	$-5.20305 - 7.91054I$
$u = -0.397188 + 0.664692I$	$-3.31119 + 5.72979I$	$-10.05626 - 7.33064I$
$u = -0.397188 - 0.664692I$	$-3.31119 - 5.72979I$	$-10.05626 + 7.33064I$
$u = \ \ 0.528416 + 0.546036I$	$1.33332 + 5.27035I$	$-6.71990 - 1.90933I$
$u = \ \ 0.528416 - 0.546036I$	$1.33332 - 5.27035I$	$-6.71990 + 1.90933I$
$u = \ \ 1.240960 + 0.124497I$	$-1.94572 - 1.01820I$	0
$u = \ \ 1.240960 - 0.124497I$	$-1.94572 + 1.01820I$	0
$u = -0.494882 + 0.561225I$	$-3.73492 - 1.67350I$	$-11.57713 + 0.85623I$
$u = -0.494882 - 0.561225I$	$-3.73492 + 1.67350I$	$-11.57713 - 0.85623I$
$u = \ \ 0.441277 + 0.595069I$	$-1.58749 - 1.92674I$	$-8.17224 + 4.16982I$
$u = \ \ 0.441277 - 0.595069I$	$-1.58749 + 1.92674I$	$-8.17224 - 4.16982I$
$u = \ \ 0.407690 + 0.618254I$	$-1.47350 - 1.99549I$	$-7.38990 + 2.72369I$
$u = \ \ 0.407690 - 0.618254I$	$-1.47350 + 1.99549I$	$-7.38990 - 2.72369I$
$u = \ \ 1.263800 + 0.221984I$	$2.87934 - 7.34272I$	0
$u = \ \ 1.263800 - 0.221984I$	$2.87934 + 7.34272I$	0
$u = -1.276900 + 0.186164I$	$-2.59332 + 4.30245I$	0
$u = -1.276900 - 0.186164I$	$-2.59332 - 4.30245I$	0
$u = -0.297294 + 0.620737I$	$4.69829 + 1.24621I$	$-1.93786 - 3.60564I$
$u = -0.297294 - 0.620737I$	$4.69829 - 1.24621I$	$-1.93786 + 3.60564I$
$u = -0.062298 + 0.646826I$	$6.95779 + 4.17599I$	$1.17304 - 4.31736I$
$u = -0.062298 - 0.646826I$	$6.95779 - 4.17599I$	$1.17304 + 4.31736I$
$u = -1.37176$	-5.91200	0
$u = \ \ 1.386810 + 0.059846I$	$-2.09433 - 3.02163I$	0
$u = \ \ 1.386810 - 0.059846I$	$-2.09433 + 3.02163I$	0
$u = \ \ 0.057342 + 0.580744I$	$1.51039 - 1.50155I$	$-2.27260 + 5.37426I$
$u = \ \ 0.057342 - 0.580744I$	$1.51039 + 1.50155I$	$-2.27260 - 5.37426I$
$u = -0.506673 + 0.270240I$	$3.63229 + 1.96690I$	$-5.76565 - 3.43589I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.506673 - 0.270240I$	$3.63229 - 1.96690I$	$-5.76565 + 3.43589I$
$u = 1.42136 + 0.23318I$	$-0.82034 - 4.36000I$	0
$u = 1.42136 - 0.23318I$	$-0.82034 + 4.36000I$	0
$u = -1.45582 + 0.23236I$	$-7.46462 + 5.12455I$	0
$u = -1.45582 - 0.23236I$	$-7.46462 - 5.12455I$	0
$u = -1.46312 + 0.21522I$	$-7.72158 + 4.89307I$	0
$u = -1.46312 - 0.21522I$	$-7.72158 - 4.89307I$	0
$u = 1.45856 + 0.24779I$	$-9.28633 - 9.06645I$	0
$u = 1.45856 - 0.24779I$	$-9.28633 + 9.06645I$	0
$u = -1.45711 + 0.25642I$	$-4.02180 + 12.82070I$	0
$u = -1.45711 - 0.25642I$	$-4.02180 - 12.82070I$	0
$u = 1.46935 + 0.19673I$	$-10.04570 - 1.08177I$	0
$u = 1.46935 - 0.19673I$	$-10.04570 + 1.08177I$	0
$u = -1.47298 + 0.18376I$	$-5.09568 - 2.64921I$	0
$u = -1.47298 - 0.18376I$	$-5.09568 + 2.64921I$	0
$u = 0.346604$	-0.677522	-14.9940

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6	$u^{46} + u^{45} + \cdots - 3u - 1$
c_3	$u^{46} - 11u^{45} + \cdots - 95u + 11$
c_4, c_9, c_{10}	$u^{46} - u^{45} + \cdots - u - 1$
c_5	$u^{46} + 3u^{45} + \cdots + 95u + 56$
c_7	$u^{46} - u^{45} + \cdots - 3u - 2$
c_8, c_{11}	$u^{46} + 7u^{45} + \cdots + 119u + 7$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6	$y^{46} + 41y^{45} + \cdots - 5y + 1$
c_3	$y^{46} + 5y^{45} + \cdots + 2679y + 121$
c_4, c_9, c_{10}	$y^{46} - 43y^{45} + \cdots - 5y + 1$
c_5	$y^{46} - 15y^{45} + \cdots - 63233y + 3136$
c_7	$y^{46} - 3y^{45} + \cdots + 15y + 4$
c_8, c_{11}	$y^{46} + 37y^{45} + \cdots - 1337y + 49$