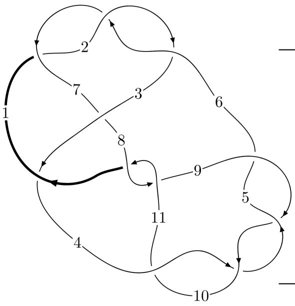
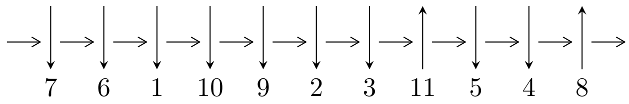
$11a_{311}$ $(K11a_{311})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{39} - u^{38} + \cdots + 2u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 39 representations.

[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. $I_1^u = \langle u^{39} - u^{38} + \cdots + 2u - 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^3 - 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^4 + 3u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^8 + 5u^6 + 7u^4 + 2u^2 + 1 \\ -u^8 - 4u^6 - 4u^4 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{17} + 10u^{15} + 39u^{13} + 74u^{11} + 71u^9 + 38u^7 + 18u^5 + 4u^3 + u \\ -u^{17} - 9u^{15} - 31u^{13} - 50u^{11} - 37u^9 - 12u^7 - 4u^5 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{25} + 14u^{23} + \cdots + 10u^3 + u \\ -u^{27} - 15u^{25} + \cdots - 3u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{30} - 17u^{28} + \cdots + 2u^2 + 1 \\ u^{30} + 16u^{28} + \cdots - 6u^4 - 3u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{30} - 17u^{28} + \cdots + 2u^2 + 1 \\ u^{30} + 16u^{28} + \cdots - 6u^4 - 3u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{38} + 4u^{37} + \cdots - 16u^2 - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6	$u^{39} + u^{38} + \cdots + 2u + 1$
c_3	$u^{39} - 9u^{38} + \cdots - 112u + 17$
c_4, c_5, c_9 c_{10}	$u^{39} + u^{38} + \cdots + 2u + 1$
c_7	$u^{39} - u^{38} + \cdots - 2u^2 + 1$
c_8, c_{11}	$u^{39} + 7u^{38} + \cdots + 120u + 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6	$y^{39} + 35y^{38} + \cdots + 4y - 1$
c_3	$y^{39} + 7y^{38} + \cdots - 2076y - 289$
c_4, c_5, c_9 c_{10}	$y^{39} + 43y^{38} + \cdots + 4y - 1$
c_7	$y^{39} - y^{38} + \cdots + 4y - 1$
c_8, c_{11}	$y^{39} + 23y^{38} + \cdots + 3588y - 289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.574160 + 0.594650I$	$2.26953 - 9.16193I$	$-4.31482 + 8.21466I$
$u = 0.574160 - 0.594650I$	$2.26953 + 9.16193I$	$-4.31482 - 8.21466I$
$u = -0.568267 + 0.567303I$	$-2.96795 + 5.55181I$	$-9.25872 - 7.70638I$
$u = -0.568267 - 0.567303I$	$-2.96795 - 5.55181I$	$-9.25872 + 7.70638I$
$u = -0.131849 + 0.785677I$	$6.72383 + 4.04302I$	$1.83134 - 4.62679I$
$u = -0.131849 - 0.785677I$	$6.72383 - 4.04302I$	$1.83134 + 4.62679I$
$u = -0.436022 + 0.604817I$	$4.84305 + 1.02619I$	$-1.08808 - 3.88143I$
$u = -0.436022 - 0.604817I$	$4.84305 - 1.02619I$	$-1.08808 + 3.88143I$
$u = 0.538839 + 0.511805I$	$-1.18645 - 1.89478I$	$-6.62379 + 3.07678I$
$u = 0.538839 - 0.511805I$	$-1.18645 + 1.89478I$	$-6.62379 - 3.07678I$
$u = 0.560794 + 0.470702I$	$-1.29404 - 1.89422I$	$-7.65532 + 4.23095I$
$u = 0.560794 - 0.470702I$	$-1.29404 + 1.89422I$	$-7.65532 - 4.23095I$
$u = -0.584786 + 0.399530I$	$-3.45995 - 1.60136I$	$-11.19941 + 0.98974I$
$u = -0.584786 - 0.399530I$	$-3.45995 + 1.60136I$	$-11.19941 - 0.98974I$
$u = 0.604755 + 0.364312I$	$1.59535 + 5.13986I$	$-6.25494 - 2.11218I$
$u = 0.604755 - 0.364312I$	$1.59535 - 5.13986I$	$-6.25494 + 2.11218I$
$u = 0.101809 + 0.665055I$	$1.37394 - 1.42753I$	$-1.59581 + 5.78078I$
$u = 0.101809 - 0.665055I$	$1.37394 + 1.42753I$	$-1.59581 - 5.78078I$
$u = 0.11689 + 1.44352I$	$7.31578 + 2.67288I$	0
$u = 0.11689 - 1.44352I$	$7.31578 - 2.67288I$	0
$u = -0.13315 + 1.47390I$	$2.59124 + 0.84756I$	0
$u = -0.13315 - 1.47390I$	$2.59124 - 0.84756I$	0
$u = -0.474394 + 0.165911I$	$3.63716 + 2.05070I$	$-5.79681 - 3.19622I$
$u = -0.474394 - 0.165911I$	$3.63716 - 2.05070I$	$-5.79681 + 3.19622I$
$u = 0.15150 + 1.50620I$	$5.20817 - 4.40207I$	0
$u = 0.15150 - 1.50620I$	$5.20817 + 4.40207I$	0
$u = 0.15186 + 1.53774I$	$5.65303 - 4.34476I$	0
$u = 0.15186 - 1.53774I$	$5.65303 + 4.34476I$	0
$u = -0.16892 + 1.55091I$	$4.08876 + 8.22597I$	0
$u = -0.16892 - 1.55091I$	$4.08876 - 8.22597I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.12882 + 1.56443I$	$12.14090 + 3.09884I$	0
$u = -0.12882 - 1.56443I$	$12.14090 - 3.09884I$	0
$u = \quad 0.17317 + 1.56134I$	$9.4648 - 11.8941I$	0
$u = \quad 0.17317 - 1.56134I$	$9.4648 + 11.8941I$	0
$u = \quad 0.01653 + 1.57431I$	$8.97845 - 1.78659I$	0
$u = \quad 0.01653 - 1.57431I$	$8.97845 + 1.78659I$	0
$u = -0.02567 + 1.59721I$	$14.7937 + 4.5566I$	0
$u = -0.02567 - 1.59721I$	$14.7937 - 4.5566I$	0
$u = \quad 0.323111$	-0.690035	-14.8490

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6	$u^{39} + u^{38} + \cdots + 2u + 1$
c_3	$u^{39} - 9u^{38} + \cdots - 112u + 17$
c_4, c_5, c_9 c_{10}	$u^{39} + u^{38} + \cdots + 2u + 1$
c_7	$u^{39} - u^{38} + \cdots - 2u^2 + 1$
c_8, c_{11}	$u^{39} + 7u^{38} + \cdots + 120u + 17$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6	$y^{39} + 35y^{38} + \cdots + 4y - 1$
c_3	$y^{39} + 7y^{38} + \cdots - 2076y - 289$
c_4, c_5, c_9 c_{10}	$y^{39} + 43y^{38} + \cdots + 4y - 1$
c_7	$y^{39} - y^{38} + \cdots + 4y - 1$
c_8, c_{11}	$y^{39} + 23y^{38} + \cdots + 3588y - 289$