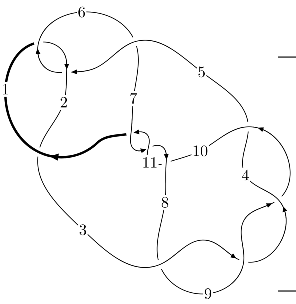
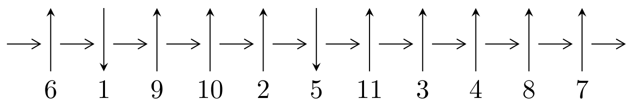
$11a_{144}$ $(K11a_{144})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{36} + u^{35} + \cdots + 3u^2 - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 36 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. $I_1^u = \langle u^{36} + u^{35} + \cdots + 3u^2 - 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^3 + 2u \\ u^5 - 3u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^4 - 3u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^8 - 5u^6 + 7u^4 - 2u^2 + 1 \\ u^8 - 4u^6 + 4u^4 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^{12} - 7u^{10} + 17u^8 - 16u^6 + 6u^4 - 5u^2 + 1 \\ u^{12} - 6u^{10} + 12u^8 - 8u^6 + u^4 - 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{25} - 14u^{23} + \cdots - 10u^3 + u \\ u^{25} - 13u^{23} + \cdots - 2u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^{16} - 9u^{14} + 31u^{12} - 50u^{10} + 39u^8 - 22u^6 + 18u^4 - 4u^2 + 1 \\ -u^{18} + 10u^{16} - 39u^{14} + 74u^{12} - 71u^{10} + 40u^8 - 26u^6 + 12u^4 - u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^{16} - 9u^{14} + 31u^{12} - 50u^{10} + 39u^8 - 22u^6 + 18u^4 - 4u^2 + 1 \\ -u^{18} + 10u^{16} - 39u^{14} + 74u^{12} - 71u^{10} + 40u^8 - 26u^6 + 12u^4 - u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{34} - 76u^{32} + 640u^{30} - 4u^{29} - 3140u^{28} + 64u^{27} + 9940u^{26} - 444u^{25} - 21336u^{24} + 1744u^{23} + 32132u^{22} - 4260u^{21} - 35572u^{20} + 6752u^{19} + 31380u^{18} - 7232u^{17} - 23756u^{16} + 5760u^{15} + 15076u^{14} - 3928u^{13} - 7748u^{12} + 2204u^{11} + 3552u^{10} - 860u^9 - 1320u^8 + 288u^7 + 336u^6 - 52u^5 - 64u^4 + 4u^2 + 16u + 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{36} - u^{35} + \cdots + 2u - 1$
c_2, c_6	$u^{36} + 13u^{35} + \cdots - 6u + 1$
c_3, c_4, c_8 c_9	$u^{36} + u^{35} + \cdots + 3u^2 - 1$
c_7, c_{10}, c_{11}	$u^{36} + 5u^{35} + \cdots - 28u - 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{36} + 13y^{35} + \cdots - 6y + 1$
c_2, c_6	$y^{36} + 21y^{35} + \cdots - 126y + 1$
c_3, c_4, c_8 c_9	$y^{36} - 39y^{35} + \cdots - 6y + 1$
c_7, c_{10}, c_{11}	$y^{36} + 33y^{35} + \cdots - 406y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.551237 + 0.623942I$	$-3.83553 + 8.85264I$	$5.15779 - 8.13246I$
$u = \ \ 0.551237 - 0.623942I$	$-3.83553 - 8.85264I$	$5.15779 + 8.13246I$
$u = \ \ 0.500204 + 0.638390I$	$-8.13948 + 2.15908I$	$0.61666 - 3.24444I$
$u = \ \ 0.500204 - 0.638390I$	$-8.13948 - 2.15908I$	$0.61666 + 3.24444I$
$u = -0.538088 + 0.602358I$	$-2.39341 - 3.42442I$	$7.19469 + 3.59924I$
$u = -0.538088 - 0.602358I$	$-2.39341 + 3.42442I$	$7.19469 - 3.59924I$
$u = \ \ 0.442037 + 0.642214I$	$-4.15822 - 4.56725I$	$4.13742 + 2.02324I$
$u = \ \ 0.442037 - 0.642214I$	$-4.15822 + 4.56725I$	$4.13742 - 2.02324I$
$u = -0.450189 + 0.609743I$	$-2.65222 - 0.70366I$	$6.36717 + 3.04538I$
$u = -0.450189 - 0.609743I$	$-2.65222 + 0.70366I$	$6.36717 - 3.04538I$
$u = -0.667436 + 0.296361I$	$2.57098 - 4.98460I$	$11.29661 + 8.23770I$
$u = -0.667436 - 0.296361I$	$2.57098 + 4.98460I$	$11.29661 - 8.23770I$
$u = \ \ 0.678355 + 0.217774I$	$3.00630 - 0.23147I$	$13.24902 - 1.70066I$
$u = \ \ 0.678355 - 0.217774I$	$3.00630 + 0.23147I$	$13.24902 + 1.70066I$
$u = -0.395417 + 0.368366I$	$-1.48090 - 1.31158I$	$2.04069 + 6.11196I$
$u = -0.395417 - 0.368366I$	$-1.48090 + 1.31158I$	$2.04069 - 6.11196I$
$u = \ \ 1.48018 + 0.05647I$	$4.63881 + 2.63367I$	0
$u = \ \ 1.48018 - 0.05647I$	$4.63881 - 2.63367I$	0
$u = -1.47649 + 0.18272I$	$2.05877 + 1.63752I$	0
$u = -1.47649 - 0.18272I$	$2.05877 - 1.63752I$	0
$u = \ \ 1.49536 + 0.16633I$	$3.69893 + 3.42946I$	0
$u = \ \ 1.49536 - 0.16633I$	$3.69893 - 3.42946I$	0
$u = -1.51977$	7.24314	14.1450
$u = -1.51236 + 0.19447I$	$-1.54097 - 5.15567I$	0
$u = -1.51236 - 0.19447I$	$-1.54097 + 5.15567I$	0
$u = -0.056671 + 0.454706I$	$0.72337 + 2.40081I$	$4.52745 - 2.97125I$
$u = -0.056671 - 0.454706I$	$0.72337 - 2.40081I$	$4.52745 + 2.97125I$
$u = \ \ 1.53594 + 0.18267I$	$4.47120 + 6.26474I$	0
$u = \ \ 1.53594 - 0.18267I$	$4.47120 - 6.26474I$	0
$u = -1.53983 + 0.19295I$	$3.07837 - 11.82290I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.53983 - 0.19295I$	$3.07837 + 11.82290I$	0
$u = -1.56923 + 0.05302I$	$10.58170 - 0.71346I$	0
$u = -1.56923 - 0.05302I$	$10.58170 + 0.71346I$	0
$u = \quad 1.56931 + 0.07118I$	$10.11540 + 6.26287I$	0
$u = \quad 1.56931 - 0.07118I$	$10.11540 - 6.26287I$	0
$u = \quad 0.425953$	0.618616	16.2520

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{36} - u^{35} + \cdots + 2u - 1$
c_2, c_6	$u^{36} + 13u^{35} + \cdots - 6u + 1$
c_3, c_4, c_8 c_9	$u^{36} + u^{35} + \cdots + 3u^2 - 1$
c_7, c_{10}, c_{11}	$u^{36} + 5u^{35} + \cdots - 28u - 7$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{36} + 13y^{35} + \cdots - 6y + 1$
c_2, c_6	$y^{36} + 21y^{35} + \cdots - 126y + 1$
c_3, c_4, c_8 c_9	$y^{36} - 39y^{35} + \cdots - 6y + 1$
c_7, c_{10}, c_{11}	$y^{36} + 33y^{35} + \cdots - 406y + 49$