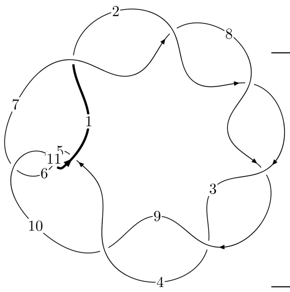
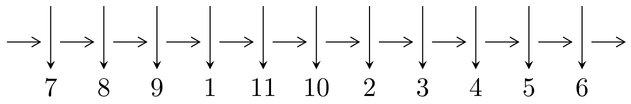
$11a_{355}$ ($K11a_{355}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{21} - 2u^{20} + \cdots - 4u + 1\rangle$$
$$I_2^u = \langle u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 22 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. $I_1^u = \langle u^{21} - 2u^{20} + \cdots - 4u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^3 + 2u \\ -u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^9 - 6u^7 + 11u^5 - 6u^3 - u \\ u^9 - 5u^7 + 7u^5 - 4u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^8 - 5u^6 + 7u^4 - 4u^2 + 1 \\ u^{10} - 6u^8 + 11u^6 - 6u^4 - u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2u^{20} - u^{19} + \cdots + 7u - 1 \\ 3u^{20} - u^{19} + \cdots + 7u - 2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2u^{20} - u^{19} + \cdots + 7u - 1 \\ 3u^{20} - u^{19} + \cdots + 7u - 2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{19} + 56u^{17} - 320u^{15} + 960u^{13} - 4u^{12} - 1620u^{11} + 36u^{10} + 1528u^9 - 116u^8 - 752u^7 + 160u^6 + 180u^5 - 88u^4 - 36u^3 + 12u^2 + 4u - 22$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_3 c_7, c_8, c_9	$u^{21} + 2u^{20} + \cdots - 4u - 1$
c_4, c_6	$u^{21} + 3u^{20} + \cdots + 4u + 1$
c_5, c_{10}, c_{11}	$u^{21} - 9u^{19} + \cdots - 4u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_7, c_8, c_9	$y^{21} - 30y^{20} + \cdots + 12y - 1$
c_4, c_6	$y^{21} + 9y^{20} + \cdots + 28y - 1$
c_5, c_{10}, c_{11}	$y^{21} - 18y^{20} + \cdots + 12y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.06100$	-4.92648	-18.3220
$u = 1.123400 + 0.187937I$	$-2.53083 - 3.48480I$	$-13.9918 + 4.5261I$
$u = 1.123400 - 0.187937I$	$-2.53083 + 3.48480I$	$-13.9918 - 4.5261I$
$u = -1.180470 + 0.219512I$	$-7.35950 + 7.22347I$	$-18.6971 - 5.7555I$
$u = -1.180470 - 0.219512I$	$-7.35950 - 7.22347I$	$-18.6971 + 5.7555I$
$u = -0.767145$	-4.86847	-19.4620
$u = 1.26094$	-11.2667	-21.9760
$u = 0.442657 + 0.446366I$	$-2.17369 - 4.94044I$	$-14.7247 + 7.2253I$
$u = 0.442657 - 0.446366I$	$-2.17369 + 4.94044I$	$-14.7247 - 7.2253I$
$u = -0.341075 + 0.425594I$	$2.10652 + 1.43336I$	$-8.34043 - 5.02190I$
$u = -0.341075 - 0.425594I$	$2.10652 - 1.43336I$	$-8.34043 + 5.02190I$
$u = 0.211742 + 0.464791I$	$-1.49910 + 1.90309I$	$-12.01421 + 0.14434I$
$u = 0.211742 - 0.464791I$	$-1.49910 - 1.90309I$	$-12.01421 - 0.14434I$
$u = 0.310992$	-0.471210	-21.0170
$u = 1.75628 + 0.01884I$	$-15.1678 - 0.2987I$	$-17.7381 - 1.0909I$
$u = 1.75628 - 0.01884I$	$-15.1678 + 0.2987I$	$-17.7381 + 1.0909I$
$u = -1.76483 + 0.04483I$	$-13.01580 + 4.45873I$	$-14.9023 - 3.4290I$
$u = -1.76483 - 0.04483I$	$-13.01580 - 4.45873I$	$-14.9023 + 3.4290I$
$u = 1.77806 + 0.05536I$	$-18.1190 - 8.4232I$	$-19.2385 + 4.5719I$
$u = 1.77806 - 0.05536I$	$-18.1190 + 8.4232I$	$-19.2385 - 4.5719I$
$u = -1.79531$	16.9713	-21.9280

II. $I_2^u = \langle u + 1 \rangle$

(i) Arc colorings

$a_3 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

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

$a_9 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$

$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_{10} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

$a_2 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$

$a_7 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_6 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

$a_{11} = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$

$a_{11} = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_3 c_5, c_7, c_8 c_9, c_{10}, c_{11}	$u-1$
c_4, c_6	u

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5, c_7, c_8 c_9, c_{10}, c_{11}	$y-1$
c_4, c_6	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$	-4.93480	-18.0000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_3 c_7, c_8, c_9	$(u-1)(u^{21}+2u^{20}+\cdots-4u-1)$
c_4, c_6	$u(u^{21}+3u^{20}+\cdots+4u+1)$
c_5, c_{10}, c_{11}	$(u-1)(u^{21}-9u^{19}+\cdots-4u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_7, c_8, c_9	$(y-1)(y^{21} - 30y^{20} + \cdots + 12y - 1)$
c_4, c_6	$y(y^{21} + 9y^{20} + \cdots + 28y - 1)$
c_5, c_{10}, c_{11}	$(y-1)(y^{21} - 18y^{20} + \cdots + 12y - 1)$