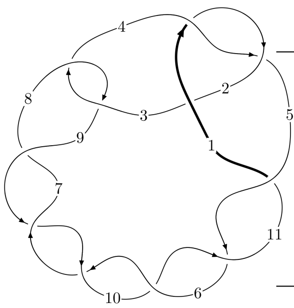
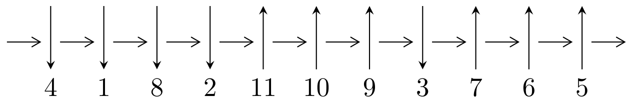
$11a_{59}$ $(K11a_{59})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{21} + u^{20} + \cdots - 3u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 21 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. $I_1^u = \langle u^{21} + u^{20} + \cdots - 3u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^9 - 2u^7 + u^5 + 2u^3 - u \\ -u^9 + 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{12} - 3u^{10} + 3u^8 + 2u^6 - 4u^4 + u^2 + 1 \\ -u^{12} + 4u^{10} - 6u^8 + 2u^6 + 3u^4 - 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{15} - 4u^{13} + 6u^{11} - 8u^7 + 6u^5 + 2u^3 - 2u \\ -u^{15} + 5u^{13} - 10u^{11} + 7u^9 + 4u^7 - 8u^5 + 2u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{18} - 5u^{16} + 10u^{14} - 5u^{12} - 11u^{10} + 17u^8 - 2u^6 - 8u^4 + 3u^2 + 1 \\ -u^{18} + 6u^{16} - 15u^{14} + 16u^{12} + u^{10} - 18u^8 + 12u^6 + 2u^4 - 3u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{18} - 5u^{16} + 10u^{14} - 5u^{12} - 11u^{10} + 17u^8 - 2u^6 - 8u^4 + 3u^2 + 1 \\ -u^{18} + 6u^{16} - 15u^{14} + 16u^{12} + u^{10} - 18u^8 + 12u^6 + 2u^4 - 3u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{19} + 24u^{17} + 4u^{16} - 64u^{15} - 20u^{14} + 76u^{13} + 44u^{12} - 4u^{11} - 36u^{10} - 100u^9 - 16u^8 + 92u^7 + 56u^6 - 24u^4 - 44u^3 - 8u^2 + 8u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{21} - u^{20} + \cdots - 3u + 1$
c_2	$u^{21} + 13u^{20} + \cdots - u + 1$
c_3, c_8	$u^{21} - u^{20} + \cdots + u + 1$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$u^{21} - 3u^{20} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{21} - 13y^{20} + \cdots - y - 1$
c_2	$y^{21} - 9y^{20} + \cdots + 3y - 1$
c_3, c_8	$y^{21} + 3y^{20} + \cdots - y - 1$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$y^{21} + 31y^{20} + \cdots + 19y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.007758+0.949268I$	$-16.7890-3.4594I$	$-3.86074+2.19983I$
$u=-0.007758-0.949268I$	$-16.7890+3.4594I$	$-3.86074-2.19983I$
$u=\ \ 1.052520+0.258621I$	$-2.94174-0.96273I$	$-7.66565+0.63893I$
$u=\ \ 1.052520-0.258621I$	$-2.94174+0.96273I$	$-7.66565-0.63893I$
$u=-1.014220+0.391763I$	$-1.91084+4.81660I$	$-2.93817-8.87119I$
$u=-1.014220-0.391763I$	$-1.91084-4.81660I$	$-2.93817+8.87119I$
$u=\ \ 0.887361$	-1.29680	-8.38840
$u=-0.742095+0.310540I$	$0.91477+1.54422I$	$4.91782-5.70348I$
$u=-0.742095-0.310540I$	$0.91477-1.54422I$	$4.91782+5.70348I$
$u=-0.042739+0.780467I$	$-5.48993-2.78640I$	$-3.21012+3.06333I$
$u=-0.042739-0.780467I$	$-5.48993+2.78640I$	$-3.21012-3.06333I$
$u=-1.190720+0.447677I$	$-8.87843+7.21776I$	$-6.27845-6.45593I$
$u=-1.190720-0.447677I$	$-8.87843-7.21776I$	$-6.27845+6.45593I$
$u=\ \ 1.208770+0.404400I$	$-9.21675-1.40322I$	$-7.22383+0.67485I$
$u=\ \ 1.208770-0.404400I$	$-9.21675+1.40322I$	$-7.22383-0.67485I$
$u=-1.290770+0.486469I$	$18.7348+8.5672I$	$-6.90755-5.03550I$
$u=-1.290770-0.486469I$	$18.7348-8.5672I$	$-6.90755+5.03550I$
$u=\ \ 1.295050+0.477383I$	$18.6641-1.6077I$	$-7.04859+0.65486I$
$u=\ \ 1.295050-0.477383I$	$18.6641+1.6077I$	$-7.04859-0.65486I$
$u=-0.211725+0.440665I$	$0.159228-1.336100I$	$1.40948+5.21346I$
$u=-0.211725-0.440665I$	$0.159228+1.336100I$	$1.40948-5.21346I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{21} - u^{20} + \cdots - 3u + 1$
c_2	$u^{21} + 13u^{20} + \cdots - u + 1$
c_3, c_8	$u^{21} - u^{20} + \cdots + u + 1$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$u^{21} - 3u^{20} + \cdots - u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{21} - 13y^{20} + \cdots - y - 1$
c_2	$y^{21} - 9y^{20} + \cdots + 3y - 1$
c_3, c_8	$y^{21} + 3y^{20} + \cdots - y - 1$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$y^{21} + 31y^{20} + \cdots + 19y - 1$