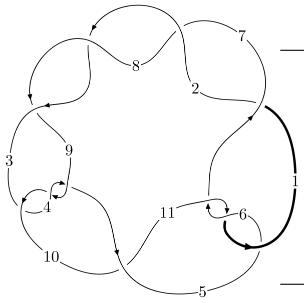
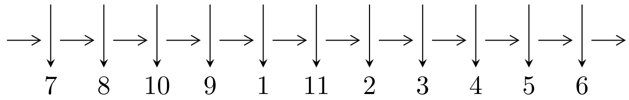
$11a_{365}$ ($K11a_{365}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle u^9 + 4u^7 - u^6 + 5u^5 - 3u^4 - 2u^2 - 3u + 1\rangle$
$I_2^u = \langle u^{16} + u^{15} + 6u^{14} + 6u^{13} + 15u^{12} + 15u^{11} + 17u^{10} + 17u^9 + 4u^8 + 4u^7 - 8u^6 - 8u^5 - 4u^4 - 4u^3 + 2u^2 + 2u$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 25 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. $I_1^u = \langle u^9 + 4u^7 - u^6 + 5u^5 - 3u^4 - 2u^2 - 3u + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^8 + 4u^7 + 12u^6 + 8u^5 + 4u^4 - 16u^2 - 8u - 18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8, c_{10}	$u^9 + 3u^8 - u^7 - 8u^6 - u^5 + 8u^4 + 6u^3 - 7u - 2$
c_3, c_4, c_5 c_6, c_9, c_{11}	$u^9 + 4u^7 + u^6 + 5u^5 + 3u^4 + 2u^2 - 3u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8, c_{10}	$y^9 - 11y^8 + 47y^7 - 98y^6 + 103y^5 - 50y^4 + 18y^3 - 52y^2 + 49y - 4$
c_3, c_4, c_5 c_6, c_9, c_{11}	$y^9 + 8y^8 + 26y^7 + 39y^6 + 13y^5 - 37y^4 - 40y^3 + 2y^2 + 13y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.930248$	-14.7946	-18.2890
$u = -0.092398 + 1.291150I$	$7.68628 + 2.63224I$	$-3.26146 - 3.89078I$
$u = -0.092398 - 1.291150I$	$7.68628 - 2.63224I$	$-3.26146 + 3.89078I$
$u = -0.704803$	-4.75227	-19.3450
$u = \quad 0.285490 + 1.280780I$	$3.22608 - 7.14899I$	$-8.72219 + 6.90579I$
$u = \quad 0.285490 - 1.280780I$	$3.22608 + 7.14899I$	$-8.72219 - 6.90579I$
$u = -0.445037 + 1.304010I$	$-6.66561 + 9.83268I$	$-11.48734 - 5.80501I$
$u = -0.445037 - 1.304010I$	$-6.66561 - 9.83268I$	$-11.48734 + 5.80501I$
$u = \quad 0.278445$	-0.461193	-21.4240

II. $\boldsymbol{I_2^u = \langle u^{16} + u^{15} + 6u^{14} + 6u^{13} + 15u^{12} + 15u^{11} + 17u^{10} + 17u^9 + 4u^8 + 4u^7 - 8u^6 - 8u^5 - 4u^4 - 4u^3 + 2u^2 + 2u + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^3 + 2u \\ u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^6 - 3u^4 - 2u^2 + 1 \\ -u^6 - 2u^4 - u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^9 - 4u^7 - 5u^5 + 3u \\ -u^9 - 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{12} + 5u^{10} + 9u^8 + 4u^6 - 6u^4 - 5u^2 + 1 \\ u^{12} + 4u^{10} + 6u^8 + 2u^6 - 3u^4 - 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2u^{15} + 12u^{13} + 29u^{11} + 28u^9 - 6u^7 - 30u^5 + u^4 - 11u^3 + 3u^2 + 6u + 3 \\ 2u^{15} + 12u^{13} + \cdots + 3u + 2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2u^{15} + 12u^{13} + 29u^{11} + 28u^9 - 6u^7 - 30u^5 + u^4 - 11u^3 + 3u^2 + 6u + 3 \\ 2u^{15} + 12u^{13} + \cdots + 3u + 2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{15} - 20u^{13} - 40u^{11} - 24u^9 + 28u^7 + 44u^5 + 4u^3 - 12u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8, c_{10}	$(u^8 - u^7 - 5u^6 + 4u^5 + 7u^4 - 4u^3 - 2u^2 + 2u - 1)^2$
c_3, c_4, c_5 c_6, c_9, c_{11}	$u^{16} - u^{15} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8, c_{10}	$(y^8 - 11y^7 + 47y^6 - 98y^5 + 103y^4 - 50y^3 + 6y^2 + 1)^2$
c_3, c_4, c_5 c_6, c_9, c_{11}	$y^{16} + 11y^{15} + \cdots + 12y^2 + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.926940 + 0.018527I$	$-10.78260 + 4.93524I$	$-14.9844 - 2.9942I$
$u = -0.926940 - 0.018527I$	$-10.78260 - 4.93524I$	$-14.9844 + 2.9942I$
$u = 0.289289 + 1.118510I$	1.93558	$-11.00319 + 0.I$
$u = 0.289289 - 1.118510I$	1.93558	$-11.00319 + 0.I$
$u = 0.076587 + 1.175000I$	$2.79859 - 1.27532I$	$-9.18053 + 5.08518I$
$u = 0.076587 - 1.175000I$	$2.79859 + 1.27532I$	$-9.18053 - 5.08518I$
$u = -0.300887 + 1.216990I$	$-1.05533 + 3.63283I$	$-14.4224 - 4.5180I$
$u = -0.300887 - 1.216990I$	$-1.05533 - 3.63283I$	$-14.4224 + 4.5180I$
$u = 0.695347 + 0.104492I$	$-1.05533 - 3.63283I$	$-14.4224 + 4.5180I$
$u = 0.695347 - 0.104492I$	$-1.05533 + 3.63283I$	$-14.4224 - 4.5180I$
$u = -0.457337 + 1.275720I$	-6.88602	$-11.82210 + 0.I$
$u = -0.457337 - 1.275720I$	-6.88602	$-11.82210 + 0.I$
$u = 0.453425 + 1.291550I$	$-10.78260 - 4.93524I$	$-14.9844 + 2.9942I$
$u = 0.453425 - 1.291550I$	$-10.78260 + 4.93524I$	$-14.9844 - 2.9942I$
$u = -0.329483 + 0.355718I$	$2.79859 + 1.27532I$	$-9.18053 - 5.08518I$
$u = -0.329483 - 0.355718I$	$2.79859 - 1.27532I$	$-9.18053 + 5.08518I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8, c_{10}	$(u^8 - u^7 - 5u^6 + 4u^5 + 7u^4 - 4u^3 - 2u^2 + 2u - 1)^2$ $\cdot\,(u^9 + 3u^8 - u^7 - 8u^6 - u^5 + 8u^4 + 6u^3 - 7u - 2)$
c_3, c_4, c_5 c_6, c_9, c_{11}	$(u^9 + 4u^7 + \cdots - 3u - 1)(u^{16} - u^{15} + \cdots - 2u + 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8, c_{10}	$(y^8 - 11y^7 + 47y^6 - 98y^5 + 103y^4 - 50y^3 + 6y^2 + 1)^2$ $\cdot\,(y^9 - 11y^8 + 47y^7 - 98y^6 + 103y^5 - 50y^4 + 18y^3 - 52y^2 + 49y - 4)$
c_3, c_4, c_5 c_6, c_9, c_{11}	$(y^9 + 8y^8 + 26y^7 + 39y^6 + 13y^5 - 37y^4 - 40y^3 + 2y^2 + 13y - 1)$ $\cdot\,(y^{16} + 11y^{15} + \cdots + 12y^2 + 1)$