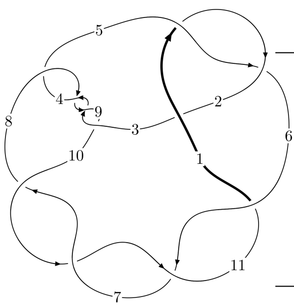
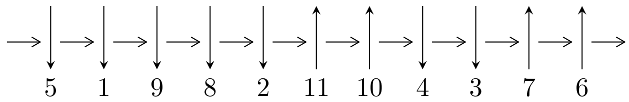
$11a_{166}$ ($K11a_{166}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{29} + u^{28} + \cdots + u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 29 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. $I_1^u = \langle u^{29} + u^{28} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^9 - 2u^7 + u^5 + 2u^3 - u \\ -u^9 + 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{12} - 3u^{10} + 3u^8 + 2u^6 - 4u^4 + u^2 + 1 \\ -u^{12} + 4u^{10} - 6u^8 + 2u^6 + 3u^4 - 2u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{26} + 7u^{24} + \cdots + u^2 + 1 \\ u^{26} - 8u^{24} + \cdots - 2u^4 - u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{17} - 4u^{15} + 7u^{13} - 4u^{11} - u^9 + 2u^7 + 2u^3 - u \\ -u^{19} + 5u^{17} - 12u^{15} + 15u^{13} - 9u^{11} - 3u^9 + 10u^7 - 8u^5 + u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{17} - 4u^{15} + 7u^{13} - 4u^{11} - u^9 + 2u^7 + 2u^3 - u \\ -u^{19} + 5u^{17} - 12u^{15} + 15u^{13} - 9u^{11} - 3u^9 + 10u^7 - 8u^5 + u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{28} + 36u^{26} + 4u^{25} - 148u^{24} - 32u^{23} + 340u^{22} + 116u^{21} - 420u^{20} - 228u^{19} + 116u^{18} + 220u^{17} + 444u^{16} + 16u^{15} - 652u^{14} - 284u^{13} + 236u^{12} + 268u^{11} + 244u^{10} - 20u^9 - 260u^8 - 116u^7 + 36u^6 + 60u^5 + 44u^4 + 4u^3 - 12u^2 - 4u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{29} + u^{28} + \cdots + u + 1$
c_2	$u^{29} + 17u^{28} + \cdots - u + 1$
c_3, c_4, c_8 c_9	$u^{29} + u^{28} + \cdots + 3u + 1$
c_6, c_7, c_{10} c_{11}	$u^{29} + 3u^{28} + \cdots + 13u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{29} - 17y^{28} + \cdots - y - 1$
c_2	$y^{29} - 9y^{28} + \cdots + 15y - 1$
c_3, c_4, c_8 c_9	$y^{29} + 31y^{28} + \cdots - y - 1$
c_6, c_7, c_{10} c_{11}	$y^{29} + 35y^{28} + \cdots + 19y - 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.044216 + 0.891256I$	$-1.19736 - 5.41362I$	$-1.89283 + 2.85739I$
$u = -0.044216 - 0.891256I$	$-1.19736 + 5.41362I$	$-1.89283 - 2.85739I$
$u = 0.014032 + 0.891951I$	$-7.81267 + 2.24104I$	$-5.36878 - 2.98057I$
$u = 0.014032 - 0.891951I$	$-7.81267 - 2.24104I$	$-5.36878 + 2.98057I$
$u = -0.734005 + 0.485496I$	$7.86536 + 2.02395I$	$2.95308 - 3.87773I$
$u = -0.734005 - 0.485496I$	$7.86536 - 2.02395I$	$2.95308 + 3.87773I$
$u = -1.070720 + 0.330612I$	$-3.23942 + 1.60334I$	$-9.34804 - 0.46623I$
$u = -1.070720 - 0.330612I$	$-3.23942 - 1.60334I$	$-9.34804 + 0.46623I$
$u = 1.107090 + 0.219678I$	$2.42526 + 0.35195I$	$-5.70450 + 0.24978I$
$u = 1.107090 - 0.219678I$	$2.42526 - 0.35195I$	$-5.70450 - 0.24978I$
$u = 1.062230 + 0.417656I$	$-2.59554 - 4.95109I$	$-6.08826 + 8.60241I$
$u = 1.062230 - 0.417656I$	$-2.59554 + 4.95109I$	$-6.08826 - 8.60241I$
$u = -1.048690 + 0.483136I$	$4.31921 + 7.00744I$	$-2.00654 - 7.01565I$
$u = -1.048690 - 0.483136I$	$4.31921 - 7.00744I$	$-2.00654 + 7.01565I$
$u = 0.752202 + 0.327002I$	$0.76241 - 1.57601I$	$1.98704 + 6.02961I$
$u = 0.752202 - 0.327002I$	$0.76241 + 1.57601I$	$1.98704 - 6.02961I$
$u = -0.816521$	-1.09235	-10.5770
$u = -0.294384 + 0.610910I$	$6.42555 - 2.74708I$	$1.52354 + 2.70649I$
$u = -0.294384 - 0.610910I$	$6.42555 + 2.74708I$	$1.52354 - 2.70649I$
$u = 1.266100 + 0.442869I$	$-5.20867 + 0.71370I$	$-5.45234 + 0.15330I$
$u = 1.266100 - 0.442869I$	$-5.20867 - 0.71370I$	$-5.45234 - 0.15330I$
$u = -1.262540 + 0.461126I$	$-11.70220 + 2.55791I$	$-8.74471 - 0.17899I$
$u = -1.262540 - 0.461126I$	$-11.70220 - 2.55791I$	$-8.74471 + 0.17899I$
$u = -1.251660 + 0.491043I$	$-4.85401 + 10.36710I$	$-4.91919 - 5.83597I$
$u = -1.251660 - 0.491043I$	$-4.85401 - 10.36710I$	$-4.91919 + 5.83597I$
$u = 1.257970 + 0.476305I$	$-11.59010 - 7.12014I$	$-8.39556 + 5.98372I$
$u = 1.257970 - 0.476305I$	$-11.59010 + 7.12014I$	$-8.39556 - 5.98372I$
$u = 0.154862 + 0.499096I$	$-0.193043 + 1.259700I$	$-2.25459 - 5.57928I$
$u = 0.154862 - 0.499096I$	$-0.193043 - 1.259700I$	$-2.25459 + 5.57928I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{29} + u^{28} + \cdots + u + 1$
c_2	$u^{29} + 17u^{28} + \cdots - u + 1$
c_3, c_4, c_8 c_9	$u^{29} + u^{28} + \cdots + 3u + 1$
c_6, c_7, c_{10} c_{11}	$u^{29} + 3u^{28} + \cdots + 13u + 3$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{29} - 17y^{28} + \cdots - y - 1$
c_2	$y^{29} - 9y^{28} + \cdots + 15y - 1$
c_3, c_4, c_8 c_9	$y^{29} + 31y^{28} + \cdots - y - 1$
c_6, c_7, c_{10} c_{11}	$y^{29} + 35y^{28} + \cdots + 19y - 9$