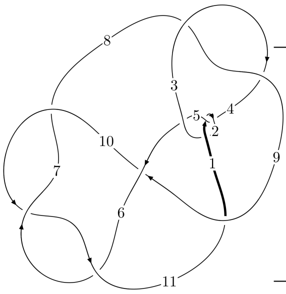
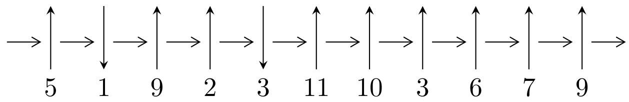
$11n_{17}$ ($K11n_{17}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{28} - 2u^{27} + \cdots + 2b - 3,\ -3u^{28} + 8u^{27} + \cdots + 2a + 12,\ u^{29} - 3u^{28} + \cdots - 4u + 1\rangle$$
$$I_2^u = \langle -au + b,\ -u^2a + a^2 - au + 2u^2 - 2a + u + 3,\ u^3 + u^2 + 2u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 35 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. $I^u_1 = \langle u^{28}-2u^{27}+\cdots+2b-3,\ -3u^{28}+8u^{27}+\cdots+2a+12,\ u^{29}-3u^{28}+\cdots-4u+1\rangle$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_3 = \begin{pmatrix}\frac{3}{2}u^{28}-4u^{27}+\cdots+8u-6\\-\frac{1}{2}u^{28}+u^{27}+\cdots-8u^2+\frac{3}{2}\end{pmatrix}$$

$$a_7 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

$$a_5 = \begin{pmatrix}-\frac{1}{2}u^{28}+u^{27}+\cdots-6u+1\\\frac{1}{2}u^{28}-u^{27}+\cdots+2u-\frac{1}{2}\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-u^3-2u\\u^3+u\end{pmatrix}$$

$$a_4 = \begin{pmatrix}\frac{1}{2}u^{28}-2u^{27}+\cdots+6u-6\\\frac{1}{2}u^{28}-u^{27}+\cdots+u+\frac{3}{2}\end{pmatrix}$$

$$a_1 = \begin{pmatrix}u^7+4u^5+4u^3\\-u^7-3u^5-2u^3+u\end{pmatrix}$$

$$a_2 = \begin{pmatrix}3u^{28}-7u^{27}+\cdots+11u-\frac{13}{2}\\-\frac{5}{2}u^{28}+7u^{27}+\cdots-6u+\frac{7}{2}\end{pmatrix}$$

$$a_8 = \begin{pmatrix}u^2+1\\-u^4-2u^2\end{pmatrix}$$

$$a_8 = \begin{pmatrix}u^2+1\\-u^4-2u^2\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2u^{28}+\frac{7}{2}u^{27}+\cdots-\frac{33}{2}u+\frac{19}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{29} + 4u^{28} + \cdots + u - 1$
c_2	$u^{29} + 18u^{28} + \cdots + 9u - 1$
c_3, c_8	$u^{29} - u^{28} + \cdots - 32u - 64$
c_5	$u^{29} - 4u^{28} + \cdots + 7u - 1$
c_6, c_7, c_{10}	$u^{29} + 3u^{28} + \cdots - 4u - 1$
c_9	$u^{29} - 3u^{28} + \cdots - 244u - 73$
c_{11}	$u^{29} + 3u^{28} + \cdots + 8u^2 - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{29} + 18y^{28} + \cdots + 9y - 1$
c_2	$y^{29} - 10y^{28} + \cdots + 425y - 1$
c_3, c_8	$y^{29} + 35y^{28} + \cdots - 31744y - 4096$
c_5	$y^{29} - 38y^{28} + \cdots + 9y - 1$
c_6, c_7, c_{10}	$y^{29} + 29y^{28} + \cdots + 16y - 1$
c_9	$y^{29} + 17y^{28} + \cdots + 23912y - 5329$
c_{11}	$y^{29} + 37y^{28} + \cdots + 16y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.691423 + 0.598710I$ $a = 1.37569 - 1.31340I$ $b = -1.73753 + 0.08448I$	$-8.85458 - 2.60938I$	$2.88623 + 0.30936I$
$u = 0.691423 - 0.598710I$ $a = 1.37569 + 1.31340I$ $b = -1.73753 - 0.08448I$	$-8.85458 + 2.60938I$	$2.88623 - 0.30936I$
$u = 0.770996 + 0.462752I$ $a = 1.67161 - 1.26096I$ $b = -1.87232 + 0.19865I$	$-8.40111 + 7.50786I$	$3.89559 - 5.68378I$
$u = 0.770996 - 0.462752I$ $a = 1.67161 + 1.26096I$ $b = -1.87232 - 0.19865I$	$-8.40111 - 7.50786I$	$3.89559 + 5.68378I$
$u = 0.690364 + 0.493803I$ $a = -1.54905 + 1.40959I$ $b = 1.76547 - 0.20820I$	$-4.66644 + 2.28896I$	$6.38324 - 2.89322I$
$u = 0.690364 - 0.493803I$ $a = -1.54905 - 1.40959I$ $b = 1.76547 + 0.20820I$	$-4.66644 - 2.28896I$	$6.38324 + 2.89322I$
$u = -0.171803 + 1.253430I$ $a = -0.337041 + 0.105101I$ $b = 0.073833 + 0.440514I$	$-2.92626 - 2.06352I$	$3.82434 + 4.59366I$
$u = -0.171803 - 1.253430I$ $a = -0.337041 - 0.105101I$ $b = 0.073833 - 0.440514I$	$-2.92626 + 2.06352I$	$3.82434 - 4.59366I$
$u = -0.674782 + 0.131684I$ $a = -0.108599 - 0.371194I$ $b = -0.122161 - 0.236174I$	$0.280276 - 0.752914I$	$5.99242 + 0.52273I$
$u = -0.674782 - 0.131684I$ $a = -0.108599 + 0.371194I$ $b = -0.122161 + 0.236174I$	$0.280276 + 0.752914I$	$5.99242 - 0.52273I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.019678 + 1.322720I$ $a = -0.737573 - 0.279772I$ $b = -0.384574 + 0.970095I$	$-3.02767 - 1.44830I$	$4.95474 + 3.01169I$
$u = -0.019678 - 1.322720I$ $a = -0.737573 + 0.279772I$ $b = -0.384574 - 0.970095I$	$-3.02767 + 1.44830I$	$4.95474 - 3.01169I$
$u = -0.297090 + 1.319120I$ $a = 0.044330 - 0.313521I$ $b = -0.400401 - 0.151621I$	$-4.26542 - 4.32252I$	$-0.05495 + 2.76648I$
$u = -0.297090 - 1.319120I$ $a = 0.044330 + 0.313521I$ $b = -0.400401 + 0.151621I$	$-4.26542 + 4.32252I$	$-0.05495 - 2.76648I$
$u = 0.070374 + 1.382890I$ $a = 0.882690 + 0.761515I$ $b = 0.99097 - 1.27426I$	$-4.31077 + 3.55507I$	$1.62564 - 2.30473I$
$u = 0.070374 - 1.382890I$ $a = 0.882690 - 0.761515I$ $b = 0.99097 + 1.27426I$	$-4.31077 - 3.55507I$	$1.62564 + 2.30473I$
$u = -0.300475 + 0.478492I$ $a = 0.156143 + 0.882607I$ $b = 0.469237 + 0.190488I$	$-1.43996 - 2.11719I$	$2.79129 + 5.41296I$
$u = -0.300475 - 0.478492I$ $a = 0.156143 - 0.882607I$ $b = 0.469237 - 0.190488I$	$-1.43996 + 2.11719I$	$2.79129 - 5.41296I$
$u = -0.11472 + 1.46953I$ $a = 0.292500 + 0.496633I$ $b = 0.763375 - 0.372865I$	$-7.73410 - 3.73497I$	$0. + 3.25156I$
$u = -0.11472 - 1.46953I$ $a = 0.292500 - 0.496633I$ $b = 0.763375 + 0.372865I$	$-7.73410 + 3.73497I$	$0. - 3.25156I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.24380 + 1.50275I$ $a = 0.103696 + 1.362120I$ $b = 2.02164 - 0.48792I$	$-11.15070 + 5.70562I$	$3.18778 - 2.80294I$
$u = 0.24380 - 1.50275I$ $a = 0.103696 - 1.362120I$ $b = 2.02164 + 0.48792I$	$-11.15070 - 5.70562I$	$3.18778 + 2.80294I$
$u = 0.28209 + 1.50525I$ $a = 0.024600 - 1.383480I$ $b = -2.08942 + 0.35324I$	$-14.7787 + 11.3588I$	$0.97389 - 5.82372I$
$u = 0.28209 - 1.50525I$ $a = 0.024600 + 1.383480I$ $b = -2.08942 - 0.35324I$	$-14.7787 - 11.3588I$	$0.97389 + 5.82372I$
$u = 0.21267 + 1.54249I$ $a = -0.131402 - 1.205960I$ $b = -1.83224 + 0.45916I$	$-15.9085 + 0.6657I$	0
$u = 0.21267 - 1.54249I$ $a = -0.131402 + 1.205960I$ $b = -1.83224 - 0.45916I$	$-15.9085 - 0.6657I$	0
$u = -0.417634$ $a = -0.553347$ $b = -0.231097$	0.741502	13.5070
$u = 0.325642 + 0.098864I$ $a = -0.41093 + 3.39717I$ $b = 0.469675 - 1.065640I$	$0.45415 + 2.26174I$	$0.65884 - 5.12612I$
$u = 0.325642 - 0.098864I$ $a = -0.41093 - 3.39717I$ $b = 0.469675 + 1.065640I$	$0.45415 - 2.26174I$	$0.65884 + 5.12612I$

II. $\boldsymbol{I^u_2 = \langle -au + b,\ -u^2a + a^2 - au + 2u^2 - 2a + u + 3,\ u^3 + u^2 + 2u + 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ au \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^2 + a - u - 1 \\ au + 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ -u^2 - u - 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2 + 1 \\ -u^2 - u - 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a \\ au \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} au + a \\ au \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ -u^2 - u - 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ -u^2 - u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^2a - 4au + 5u^2 - a + 5u + 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_5	$(y^2+y+1)^3$
c_3, c_8	y^6
c_6, c_7, c_{10}	$(y^3+3y^2+2y-1)^2$
c_9, c_{11}	$(y^3-y^2+2y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.215080 + 1.307140I$ $a = 0.706350 + 0.266290I$ $b = -0.500000 + 0.866025I$	$-3.02413 - 4.85801I$	$6.43615 + 6.24253I$
$u = -0.215080 + 1.307140I$ $a = -0.583789 + 0.478572I$ $b = -0.500000 - 0.866025I$	$-3.02413 - 0.79824I$	$2.88198 - 0.84592I$
$u = -0.215080 - 1.307140I$ $a = 0.706350 - 0.266290I$ $b = -0.500000 - 0.866025I$	$-3.02413 + 4.85801I$	$6.43615 - 6.24253I$
$u = -0.215080 - 1.307140I$ $a = -0.583789 - 0.478572I$ $b = -0.500000 + 0.866025I$	$-3.02413 + 0.79824I$	$2.88198 + 0.84592I$
$u = -0.569840$ $a = 0.87744 + 1.51977I$ $b = -0.500000 - 0.866025I$	$1.11345 - 2.02988I$	$12.18187 + 2.43783I$
$u = -0.569840$ $a = 0.87744 - 1.51977I$ $b = -0.500000 + 0.866025I$	$1.11345 + 2.02988I$	$12.18187 - 2.43783I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2+u+1)^3)(u^{29}+4u^{28}+\cdots+u-1)$
c_2	$((u^2+u+1)^3)(u^{29}+18u^{28}+\cdots+9u-1)$
c_3, c_8	$u^6(u^{29}-u^{28}+\cdots-32u-64)$
c_4	$((u^2-u+1)^3)(u^{29}+4u^{28}+\cdots+u-1)$
c_5	$((u^2+u+1)^3)(u^{29}-4u^{28}+\cdots+7u-1)$
c_6, c_7	$((u^3+u^2+2u+1)^2)(u^{29}+3u^{28}+\cdots-4u-1)$
c_9	$((u^3+u^2-1)^2)(u^{29}-3u^{28}+\cdots-244u-73)$
c_{10}	$((u^3-u^2+2u-1)^2)(u^{29}+3u^{28}+\cdots-4u-1)$
c_{11}	$((u^3+u^2-1)^2)(u^{29}+3u^{28}+\cdots+8u^2-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y^2+y+1)^3)(y^{29}+18y^{28}+\cdots+9y-1)$
c_2	$((y^2+y+1)^3)(y^{29}-10y^{28}+\cdots+425y-1)$
c_3, c_8	$y^6(y^{29}+35y^{28}+\cdots-31744y-4096)$
c_5	$((y^2+y+1)^3)(y^{29}-38y^{28}+\cdots+9y-1)$
c_6, c_7, c_{10}	$((y^3+3y^2+2y-1)^2)(y^{29}+29y^{28}+\cdots+16y-1)$
c_9	$((y^3-y^2+2y-1)^2)(y^{29}+17y^{28}+\cdots+23912y-5329)$
c_{11}	$((y^3-y^2+2y-1)^2)(y^{29}+37y^{28}+\cdots+16y-1)$