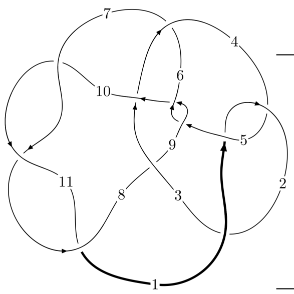
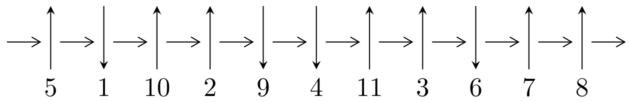
$11a_{66}$ ($K11a_{66}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 4.83591 \times 10^{64} u^{58} - 1.44015 \times 10^{65} u^{57} + \cdots + 2.71331 \times 10^{65} b + 7.55669 \times 10^{64}, \\ & - 4.47446 \times 10^{63} u^{58} + 4.62488 \times 10^{64} u^{57} + \cdots + 2.71331 \times 10^{65} a + 7.20796 \times 10^{65},\ u^{59} - 5u^{58} + \cdots + 5u^2 \end{aligned}$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 59 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. $\boldsymbol{I_1^u = \langle 4.84 \times 10^{64} u^{58} - 1.44 \times 10^{65} u^{57} + \cdots + 2.71 \times 10^{65} b + 7.56 \times 10^{64},\ -4.47 \times 10^{63} u^{58} + 4.62 \times 10^{64} u^{57} + \cdots + 2.71 \times 10^{65} a + 7.21 \times 10^{65},\ u^{59} - 5u^{58} + \cdots + 5u^2 - 1 \rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0164908u^{58} - 0.170452u^{57} + \cdots - 2.08113u - 2.65652 \\ -0.178229u^{58} + 0.530775u^{57} + \cdots + 0.638738u - 0.278505 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.194720u^{58} - 0.701226u^{57} + \cdots - 2.71987u - 2.37802 \\ -0.178229u^{58} + 0.530775u^{57} + \cdots + 0.638738u - 0.278505 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.00985244u^{58} - 0.352681u^{57} + \cdots - 2.73901u - 3.24048 \\ -0.0389600u^{58} + 0.0920662u^{57} + \cdots + 0.321451u - 0.113177 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2.78334u^{58} - 11.1287u^{57} + \cdots - 2.34565u + 5.60971 \\ 0.818170u^{58} - 2.82973u^{57} + \cdots - 0.893777u + 0.202220 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1.33059u^{58} - 7.98023u^{57} + \cdots + 2.66373u + 4.38104 \\ -0.671853u^{58} + 2.30116u^{57} + \cdots - 1.18700u - 0.702689 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1.35895u^{58} - 4.91224u^{57} + \cdots - 7.98808u + 0.456873 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1.35895u^{58} - 4.91224u^{57} + \cdots - 7.98808u + 0.456873 \\ -u^4 + 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3.13284u^{58} + 8.55288u^{57} + \cdots - 6.92957u + 2.03395$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{59} + u^{58} + \cdots + 14u - 1$
c_2	$u^{59} + 23u^{58} + \cdots + 198u - 1$
c_3	$u^{59} - 3u^{58} + \cdots - 4u + 1$
c_5, c_9	$u^{59} + u^{58} + \cdots + 5u^2 - 1$
c_6	$u^{59} + 11u^{58} + \cdots + 286u^2 + 8$
c_7, c_{10}, c_{11}	$u^{59} - 5u^{58} + \cdots + 5u^2 - 1$
c_8	$u^{59} - 15u^{58} + \cdots - 256u - 256$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{59} + 23y^{58} + \cdots + 198y - 1$
c_2	$y^{59} + 27y^{58} + \cdots + 45406y - 1$
c_3	$y^{59} - 5y^{58} + \cdots - 18y - 1$
c_5, c_9	$y^{59} - 37y^{58} + \cdots + 10y - 1$
c_6	$y^{59} + 279y^{58} + \cdots - 4576y - 64$
c_7, c_{10}, c_{11}	$y^{59} - 61y^{58} + \cdots + 10y - 1$
c_8	$y^{59} + 287y^{58} + \cdots + 1015808y - 65536$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.602290 + 0.803555I$ $a = -0.12280 + 1.44745I$ $b = -0.907835 + 1.001240I$	$-2.44624 - 11.82370I$	$0. + 9.37680I$
$u = -0.602290 - 0.803555I$ $a = -0.12280 - 1.44745I$ $b = -0.907835 - 1.001240I$	$-2.44624 + 11.82370I$	$0. - 9.37680I$
$u = -0.513328 + 0.905605I$ $a = 0.836669 + 0.413786I$ $b = 0.607726 + 0.709697I$	$-2.77146 + 6.25200I$	0
$u = -0.513328 - 0.905605I$ $a = 0.836669 - 0.413786I$ $b = 0.607726 - 0.709697I$	$-2.77146 - 6.25200I$	0
$u = 0.780237 + 0.719781I$ $a = 0.262671 + 0.669150I$ $b = 0.668932 + 0.384075I$	$2.44555 + 0.67895I$	0
$u = 0.780237 - 0.719781I$ $a = 0.262671 - 0.669150I$ $b = 0.668932 - 0.384075I$	$2.44555 - 0.67895I$	0
$u = -0.610415 + 0.675553I$ $a = 0.09095 - 1.51512I$ $b = 0.869792 - 1.011370I$	$-0.53563 - 6.33799I$	$3.85891 + 5.79197I$
$u = -0.610415 - 0.675553I$ $a = 0.09095 + 1.51512I$ $b = 0.869792 + 1.011370I$	$-0.53563 + 6.33799I$	$3.85891 - 5.79197I$
$u = -0.738862 + 0.507440I$ $a = 0.784790 - 0.069867I$ $b = 0.451996 + 0.888554I$	$-5.18481 + 0.07298I$	$-2.77397 + 1.06751I$
$u = -0.738862 - 0.507440I$ $a = 0.784790 + 0.069867I$ $b = 0.451996 - 0.888554I$	$-5.18481 - 0.07298I$	$-2.77397 - 1.06751I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.610635 + 0.920920I$ $a = -0.371965 - 0.691396I$ $b = -0.678927 - 0.415007I$	$1.69330 + 5.46743I$	0
$u = 0.610635 - 0.920920I$ $a = -0.371965 + 0.691396I$ $b = -0.678927 + 0.415007I$	$1.69330 - 5.46743I$	0
$u = 1.179590 + 0.072832I$ $a = 0.023949 + 0.735583I$ $b = 0.504296 + 0.524843I$	$1.93352 - 0.03829I$	0
$u = 1.179590 - 0.072832I$ $a = 0.023949 - 0.735583I$ $b = 0.504296 - 0.524843I$	$1.93352 + 0.03829I$	0
$u = -0.298346 + 0.756487I$ $a = -1.040070 - 0.594848I$ $b = -0.539223 - 0.629121I$	$-1.35810 + 1.65554I$	$2.46202 - 2.77708I$
$u = -0.298346 - 0.756487I$ $a = -1.040070 + 0.594848I$ $b = -0.539223 + 0.629121I$	$-1.35810 - 1.65554I$	$2.46202 + 2.77708I$
$u = -0.331322 + 0.631890I$ $a = -0.28163 + 1.56746I$ $b = -0.92852 + 1.10882I$	$-6.37379 - 4.04787I$	$-3.93072 + 5.51814I$
$u = -0.331322 - 0.631890I$ $a = -0.28163 - 1.56746I$ $b = -0.92852 - 1.10882I$	$-6.37379 + 4.04787I$	$-3.93072 - 5.51814I$
$u = -1.384970 + 0.131008I$ $a = -0.737163 - 0.719110I$ $b = 1.026640 - 0.458872I$	$3.26189 - 3.67751I$	0
$u = -1.384970 - 0.131008I$ $a = -0.737163 + 0.719110I$ $b = 1.026640 + 0.458872I$	$3.26189 + 3.67751I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.42247 + 0.01167I$ $a = -4.44893 + 9.36868I$ $b = \quad 0.072559 + 0.149112I$	$3.30587 - 2.05347I$	0
$u = -1.42247 - 0.01167I$ $a = -4.44893 - 9.36868I$ $b = \quad 0.072559 - 0.149112I$	$3.30587 + 2.05347I$	0
$u = \quad 0.009641 + 0.561258I$ $a = -0.84390 - 1.40804I$ $b = -0.499557 - 0.473604I$	$-1.27830 + 1.37033I$	$-1.75929 - 4.49534I$
$u = \quad 0.009641 - 0.561258I$ $a = -0.84390 + 1.40804I$ $b = -0.499557 + 0.473604I$	$-1.27830 - 1.37033I$	$-1.75929 + 4.49534I$
$u = \quad 1.43879 + 0.18099I$ $a = -0.623609 + 0.710901I$ $b = \quad 1.51759 + 1.20583I$	$-0.67928 + 6.89950I$	0
$u = \quad 1.43879 - 0.18099I$ $a = -0.623609 - 0.710901I$ $b = \quad 1.51759 - 1.20583I$	$-0.67928 - 6.89950I$	0
$u = \quad 1.45449$ $a = \quad 0.915660$ $b = -0.262354$	3.37740	0
$u = \quad 0.402436 + 0.343152I$ $a = -0.669541 + 0.915825I$ $b = -1.23192 + 0.73590I$	$-1.56344 + 4.78630I$	$2.02963 - 10.35215I$
$u = \quad 0.402436 - 0.343152I$ $a = -0.669541 - 0.915825I$ $b = -1.23192 - 0.73590I$	$-1.56344 - 4.78630I$	$2.02963 + 10.35215I$
$u = \quad 0.526798 + 0.021630I$ $a = \quad 0.188140 + 0.404628I$ $b = \quad 0.891983 + 0.249450I$	$1.131640 + 0.063901I$	$10.49402 + 0.56940I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.526798 - 0.021630I$ $a = 0.188140 - 0.404628I$ $b = 0.891983 - 0.249450I$	$1.131640 - 0.063901I$	$10.49402 - 0.56940I$
$u = 1.47328 + 0.05201I$ $a = -0.062797 - 0.841379I$ $b = 0.39778 - 1.37113I$	$6.50993 + 3.19293I$	0
$u = 1.47328 - 0.05201I$ $a = -0.062797 + 0.841379I$ $b = 0.39778 + 1.37113I$	$6.50993 - 3.19293I$	0
$u = -1.47786 + 0.08730I$ $a = -0.045066 + 0.186936I$ $b = 1.71673 + 1.40690I$	$4.61526 - 6.26348I$	0
$u = -1.47786 - 0.08730I$ $a = -0.045066 - 0.186936I$ $b = 1.71673 - 1.40690I$	$4.61526 + 6.26348I$	0
$u = -0.490640 + 0.130399I$ $a = -0.01807 - 2.09045I$ $b = 0.412044 - 1.147950I$	$0.68155 - 2.84567I$	$8.20760 + 7.93876I$
$u = -0.490640 - 0.130399I$ $a = -0.01807 + 2.09045I$ $b = 0.412044 + 1.147950I$	$0.68155 + 2.84567I$	$8.20760 - 7.93876I$
$u = 1.49940 + 0.03329I$ $a = 0.219999 - 0.701654I$ $b = -0.91452 - 1.88246I$	$7.24513 + 3.41415I$	0
$u = 1.49940 - 0.03329I$ $a = 0.219999 + 0.701654I$ $b = -0.91452 + 1.88246I$	$7.24513 - 3.41415I$	0
$u = -1.50177 + 0.00830I$ $a = 0.297564 + 0.231736I$ $b = -1.67755 + 0.55669I$	$7.78177 - 0.18045I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.50177 - 0.00830I$ $a = 0.297564 - 0.231736I$ $b = -1.67755 - 0.55669I$	$7.78177 + 0.18045I$	0
$u = 1.55701 + 0.22591I$ $a = 0.536066 - 0.912338I$ $b = -1.21260 - 1.20134I$	$6.60505 + 9.68161I$	0
$u = 1.55701 - 0.22591I$ $a = 0.536066 + 0.912338I$ $b = -1.21260 + 1.20134I$	$6.60505 - 9.68161I$	0
$u = 1.56490 + 0.27474I$ $a = -0.575143 + 0.964495I$ $b = 1.19103 + 1.13486I$	$4.6425 + 15.8011I$	0
$u = 1.56490 - 0.27474I$ $a = -0.575143 - 0.964495I$ $b = 1.19103 - 1.13486I$	$4.6425 - 15.8011I$	0
$u = -1.57947 + 0.22255I$ $a = 0.272883 + 0.711732I$ $b = -1.148480 + 0.713126I$	$10.09090 - 4.09953I$	0
$u = -1.57947 - 0.22255I$ $a = 0.272883 - 0.711732I$ $b = -1.148480 - 0.713126I$	$10.09090 + 4.09953I$	0
$u = 0.023287 + 0.400883I$ $a = -0.56139 - 3.63273I$ $b = -0.438386 - 0.419133I$	$-1.06640 + 1.39300I$	$-4.87303 - 6.40557I$
$u = 0.023287 - 0.400883I$ $a = -0.56139 + 3.63273I$ $b = -0.438386 + 0.419133I$	$-1.06640 - 1.39300I$	$-4.87303 + 6.40557I$
$u = -1.57430 + 0.29595I$ $a = -0.251509 - 0.797155I$ $b = 1.101890 - 0.732255I$	$8.82124 - 9.84696I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.57430-0.29595I$ $a=-0.251509+0.797155I$ $b=\ \ 1.101890+0.732255I$	$8.82124+9.84696I$	0
$u=-0.344914+0.168527I$ $a=\ \ 0.30650-2.60805I$ $b=-0.194817-0.606555I$	$0.46273-2.38122I$	$3.10427+1.63624I$
$u=-0.344914-0.168527I$ $a=\ \ 0.30650+2.60805I$ $b=-0.194817+0.606555I$	$0.46273+2.38122I$	$3.10427-1.63624I$
$u=\ \ 0.253207+0.285102I$ $a=-3.18179+4.75906I$ $b=\ \ 0.552194+0.272160I$	$-1.85782-2.60565I$	$2.86490-11.40100I$
$u=\ \ 0.253207-0.285102I$ $a=-3.18179-4.75906I$ $b=\ \ 0.552194-0.272160I$	$-1.85782+2.60565I$	$2.86490+11.40100I$
$u=\ \ 1.61782+0.39605I$ $a=\ \ 0.061041+0.323493I$ $b=\ \ 0.609284+0.193792I$	$4.33658+3.40939I$	0
$u=\ \ 1.61782-0.39605I$ $a=\ \ 0.061041-0.323493I$ $b=\ \ 0.609284-0.193792I$	$4.33658-3.40939I$	0
$u=\ \ 1.70668+0.24332I$ $a=-0.003673-0.211471I$ $b=-0.588967-0.121325I$	$4.61241-1.25946I$	0
$u=\ \ 1.70668-0.24332I$ $a=-0.003673+0.211471I$ $b=-0.588967+0.121325I$	$4.61241+1.25946I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{59} + u^{58} + \cdots + 14u - 1$
c_2	$u^{59} + 23u^{58} + \cdots + 198u - 1$
c_3	$u^{59} - 3u^{58} + \cdots - 4u + 1$
c_5, c_9	$u^{59} + u^{58} + \cdots + 5u^2 - 1$
c_6	$u^{59} + 11u^{58} + \cdots + 286u^2 + 8$
c_7, c_{10}, c_{11}	$u^{59} - 5u^{58} + \cdots + 5u^2 - 1$
c_8	$u^{59} - 15u^{58} + \cdots - 256u - 256$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{59} + 23y^{58} + \cdots + 198y - 1$
c_2	$y^{59} + 27y^{58} + \cdots + 45406y - 1$
c_3	$y^{59} - 5y^{58} + \cdots - 18y - 1$
c_5, c_9	$y^{59} - 37y^{58} + \cdots + 10y - 1$
c_6	$y^{59} + 279y^{58} + \cdots - 4576y - 64$
c_7, c_{10}, c_{11}	$y^{59} - 61y^{58} + \cdots + 10y - 1$
c_8	$y^{59} + 287y^{58} + \cdots + 1015808y - 65536$