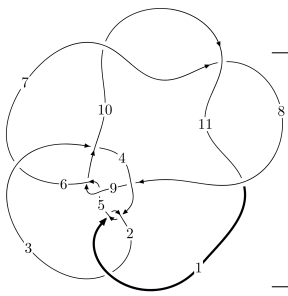
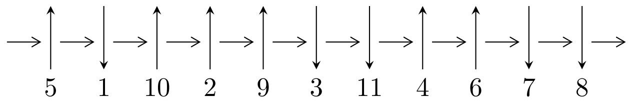
$11a_{28}$ ($K11a_{28}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 2.01615 \times 10^{63} u^{59} - 7.91768 \times 10^{63} u^{58} + \cdots + 1.22570 \times 10^{63} b - 6.80954 \times 10^{62},$$
$$4.32115 \times 10^{62} u^{59} - 2.12406 \times 10^{63} u^{58} + \cdots + 4.08568 \times 10^{62} a - 3.28832 \times 10^{62},\ u^{60} - 5u^{59} + \cdots + 5u^2 +$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 60 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. $I^u_1 =$
$\langle 2.02\times10^{63}u^{59}-7.92\times10^{63}u^{58}+\cdots+1.23\times10^{63}b-6.81\times10^{62},\ 4.32\times10^{62}u^{59}-2.12\times10^{63}u^{58}+\cdots+4.09\times10^{62}a-3.29\times10^{62},\ u^{60}-5u^{59}+\cdots+5u^2+1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-1.05763u^{59}+5.19879u^{58}+\cdots-2.64467u+0.804841\\-1.64489u^{59}+6.45970u^{58}+\cdots-0.851795u+0.555561\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-3.61502u^{59}+14.3888u^{58}+\cdots+0.169951u+2.62747\\-3.69618u^{59}+14.2840u^{58}+\cdots-1.10903u+2.32983\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0.370829u^{59}-0.610393u^{58}+\cdots+4.23462u+0.393300\\-1.17480u^{59}+5.71906u^{58}+\cdots+2.79612u+1.18421\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-2.95589u^{59}+12.2653u^{58}+\cdots-2.05741u+2.48023\\-3.54315u^{59}+13.5262u^{58}+\cdots-0.264534u+2.23095\end{pmatrix}$$
$$a_9 = \begin{pmatrix}3.21953u^{59}-12.4002u^{58}+\cdots+0.378631u-1.25671\\5.61791u^{59}-21.2160u^{58}+\cdots+0.447850u-2.31429\end{pmatrix}$$
$$a_5 = \begin{pmatrix}3.31846u^{59}-11.7462u^{58}+\cdots-0.711385u-2.30380\\3.31846u^{59}-11.7462u^{58}+\cdots-2.71138u-2.30380\end{pmatrix}$$
$$a_5 = \begin{pmatrix}3.31846u^{59}-11.7462u^{58}+\cdots-0.711385u-2.30380\\3.31846u^{59}-11.7462u^{58}+\cdots-2.71138u-2.30380\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -10.2583u^{59}+32.5172u^{58}+\cdots+12.1083u+12.4600$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{60} + u^{59} + \cdots - 2u + 1$
c_2	$u^{60} + 25u^{59} + \cdots + 6u + 1$
c_3	$u^{60} - 3u^{59} + \cdots - 4u + 1$
c_5, c_9	$u^{60} - u^{59} + \cdots + 5u^2 + 1$
c_6	$u^{60} - 13u^{59} + \cdots - 46u - 1$
c_7, c_{10}, c_{11}	$u^{60} + 5u^{59} + \cdots + 5u^2 + 1$
c_8	$u^{60} + 17u^{59} + \cdots + 288u + 79$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{60} + 25y^{59} + \cdots + 6y + 1$
c_2	$y^{60} + 21y^{59} + \cdots + 62y + 1$
c_3	$y^{60} + 5y^{59} + \cdots + 30y + 1$
c_5, c_9	$y^{60} - 43y^{59} + \cdots + 10y + 1$
c_6	$y^{60} + 109y^{59} + \cdots - 2526y + 1$
c_7, c_{10}, c_{11}	$y^{60} - 59y^{59} + \cdots + 10y + 1$
c_8	$y^{60} + 73y^{59} + \cdots - 15478y + 6241$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.533782 + 0.834528I$ $a = -0.670577 - 0.244749I$ $b = -0.90360 + 1.11851I$	$3.66250 + 11.73970I$	$0. - 9.07508I$
$u = -0.533782 - 0.834528I$ $a = -0.670577 + 0.244749I$ $b = -0.90360 - 1.11851I$	$3.66250 - 11.73970I$	$0. + 9.07508I$
$u = 0.911823 + 0.442516I$ $a = 0.720916 - 0.600914I$ $b = 0.661282 + 0.144344I$	$-2.94476 - 0.12365I$	0
$u = 0.911823 - 0.442516I$ $a = 0.720916 + 0.600914I$ $b = 0.661282 - 0.144344I$	$-2.94476 + 0.12365I$	0
$u = -0.698160 + 0.696499I$ $a = -0.527979 + 0.494269I$ $b = 0.451910 + 0.688864I$	$4.58804 - 1.10123I$	0
$u = -0.698160 - 0.696499I$ $a = -0.527979 - 0.494269I$ $b = 0.451910 - 0.688864I$	$4.58804 + 1.10123I$	0
$u = 0.481557 + 0.943096I$ $a = 0.369140 - 0.171842I$ $b = 0.746469 + 0.482040I$	$-1.19130 - 5.66306I$	0
$u = 0.481557 - 0.943096I$ $a = 0.369140 + 0.171842I$ $b = 0.746469 - 0.482040I$	$-1.19130 + 5.66306I$	0
$u = -0.617210 + 0.869107I$ $a = 0.378949 - 0.544669I$ $b = -0.494270 - 0.791701I$	$3.47399 - 6.14744I$	0
$u = -0.617210 - 0.869107I$ $a = 0.378949 + 0.544669I$ $b = -0.494270 + 0.791701I$	$3.47399 + 6.14744I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.435894 + 0.774361I$ $a = 0.472416 + 0.478267I$ $b = 0.804781 - 1.056000I$	$5.33401 + 6.06206I$	$5.25486 - 4.79805I$
$u = -0.435894 - 0.774361I$ $a = 0.472416 - 0.478267I$ $b = 0.804781 + 1.056000I$	$5.33401 - 6.06206I$	$5.25486 + 4.79805I$
$u = 1.201330 + 0.191717I$ $a = 1.064620 - 0.375117I$ $b = 0.790732 + 0.105612I$	$-2.92701 - 0.02185I$	0
$u = 1.201330 - 0.191717I$ $a = 1.064620 + 0.375117I$ $b = 0.790732 - 0.105612I$	$-2.92701 + 0.02185I$	0
$u = 0.240498 + 0.711477I$ $a = -0.001003 + 0.236197I$ $b = -0.565357 - 0.577780I$	$0.18899 - 1.45187I$	$1.34936 + 5.34755I$
$u = 0.240498 - 0.711477I$ $a = -0.001003 - 0.236197I$ $b = -0.565357 + 0.577780I$	$0.18899 + 1.45187I$	$1.34936 - 5.34755I$
$u = -1.27084$ $a = -1.71198$ $b = -0.0201988$	1.61104	0
$u = -0.529233 + 0.441086I$ $a = -1.45011 - 1.15685I$ $b = -0.949462 + 0.711668I$	$-1.15016 + 4.52322I$	$-1.58408 - 7.91740I$
$u = -0.529233 - 0.441086I$ $a = -1.45011 + 1.15685I$ $b = -0.949462 - 0.711668I$	$-1.15016 - 4.52322I$	$-1.58408 + 7.91740I$
$u = 1.310500 + 0.080285I$ $a = 0.683386 - 0.575495I$ $b = 0.315013 + 1.084750I$	$0.72651 - 3.69060I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.310500 - 0.080285I$ $a = 0.683386 + 0.575495I$ $b = 0.315013 - 1.084750I$	$0.72651 + 3.69060I$	0
$u = 1.325720 + 0.012392I$ $a = 1.57480 - 0.05757I$ $b = 1.151530 + 0.076666I$	$-3.09648 - 0.01865I$	0
$u = 1.325720 - 0.012392I$ $a = 1.57480 + 0.05757I$ $b = 1.151530 - 0.076666I$	$-3.09648 + 0.01865I$	0
$u = -1.349120 + 0.039607I$ $a = -0.773783 + 1.050430I$ $b = -0.63332 + 1.71678I$	$-3.47046 + 2.59110I$	0
$u = -1.349120 - 0.039607I$ $a = -0.773783 - 1.050430I$ $b = -0.63332 - 1.71678I$	$-3.47046 - 2.59110I$	0
$u = -1.389380 + 0.126415I$ $a = 1.57913 - 0.80479I$ $b = 0.163124 - 0.074758I$	$-2.17172 + 6.43280I$	0
$u = -1.389380 - 0.126415I$ $a = 1.57913 + 0.80479I$ $b = 0.163124 + 0.074758I$	$-2.17172 - 6.43280I$	0
$u = -0.019258 + 0.599596I$ $a = 0.340438 + 0.021539I$ $b = -0.531337 - 0.774461I$	$0.288784 - 1.376440I$	$1.36514 + 4.13021I$
$u = -0.019258 - 0.599596I$ $a = 0.340438 - 0.021539I$ $b = -0.531337 + 0.774461I$	$0.288784 + 1.376440I$	$1.36514 - 4.13021I$
$u = -1.407840 + 0.014691I$ $a = 7.96415 + 10.48020I$ $b = 7.88865 + 10.58440I$	$-3.27672 + 2.05815I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.407840 - 0.014691I$ $a = 7.96415 - 10.48020I$ $b = 7.88865 - 10.58440I$	$-3.27672 - 2.05815I$	0
$u = 1.41880 + 0.09036I$ $a = -2.04902 - 0.26241I$ $b = -1.238870 - 0.042642I$	$-5.60317 - 3.97257I$	0
$u = 1.41880 - 0.09036I$ $a = -2.04902 + 0.26241I$ $b = -1.238870 + 0.042642I$	$-5.60317 + 3.97257I$	0
$u = -1.46251 + 0.26342I$ $a = -1.42804 + 0.02348I$ $b = -1.117840 + 0.804567I$	$-5.51717 + 5.00817I$	0
$u = -1.46251 - 0.26342I$ $a = -1.42804 - 0.02348I$ $b = -1.117840 - 0.804567I$	$-5.51717 - 5.00817I$	0
$u = -0.511763$ $a = -0.617467$ $b = 0.872896$	2.63603	0.0801050
$u = 0.224433 + 0.448869I$ $a = 3.03949 + 0.10848I$ $b = -0.050575 + 0.698984I$	$2.95363 - 4.39756I$	$7.00202 + 8.96362I$
$u = 0.224433 - 0.448869I$ $a = 3.03949 - 0.10848I$ $b = -0.050575 - 0.698984I$	$2.95363 + 4.39756I$	$7.00202 - 8.96362I$
$u = 1.49614 + 0.15819I$ $a = -1.86240 + 0.11159I$ $b = -1.065680 - 0.882622I$	$-7.75326 - 6.77334I$	0
$u = 1.49614 - 0.15819I$ $a = -1.86240 - 0.11159I$ $b = -1.065680 + 0.882622I$	$-7.75326 + 6.77334I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.058164 + 0.491656I$ $a = -1.57145 + 1.91980I$ $b = 0.377145 - 0.730232I$	$4.80170 + 1.71569I$	$12.12772 - 3.69255I$
$u = -0.058164 - 0.491656I$ $a = -1.57145 - 1.91980I$ $b = 0.377145 + 0.730232I$	$4.80170 - 1.71569I$	$12.12772 + 3.69255I$
$u = 1.49031 + 0.27633I$ $a = 1.71435 + 0.26114I$ $b = 1.16235 + 1.22739I$	$-0.89788 - 9.86974I$	0
$u = 1.49031 - 0.27633I$ $a = 1.71435 - 0.26114I$ $b = 1.16235 - 1.22739I$	$-0.89788 + 9.86974I$	0
$u = -1.54271 + 0.14787I$ $a = 1.228230 + 0.200344I$ $b = 0.883110 - 0.618293I$	$-10.59540 + 2.29159I$	0
$u = -1.54271 - 0.14787I$ $a = 1.228230 - 0.200344I$ $b = 0.883110 + 0.618293I$	$-10.59540 - 2.29159I$	0
$u = -1.52921 + 0.32206I$ $a = 1.51542 + 0.06338I$ $b = 1.204880 - 0.703616I$	$-7.70682 + 10.17220I$	0
$u = -1.52921 - 0.32206I$ $a = 1.51542 - 0.06338I$ $b = 1.204880 + 0.703616I$	$-7.70682 - 10.17220I$	0
$u = 1.53838 + 0.29681I$ $a = -1.84096 - 0.34579I$ $b = -1.29978 - 1.23886I$	$-3.0641 - 15.8799I$	0
$u = 1.53838 - 0.29681I$ $a = -1.84096 + 0.34579I$ $b = -1.29978 + 1.23886I$	$-3.0641 + 15.8799I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.52138 + 0.44760I$ $a = -0.660099 + 0.354611I$ $b = -0.626261 - 0.056205I$	$-4.06241 - 3.68110I$	0
$u = 1.52138 - 0.44760I$ $a = -0.660099 - 0.354611I$ $b = -0.626261 + 0.056205I$	$-4.06241 + 3.68110I$	0
$u = -0.026377 + 0.398328I$ $a = 1.213060 + 0.011016I$ $b = 0.114689 - 1.009800I$	$0.55804 - 1.39773I$	$4.97891 + 5.04482I$
$u = -0.026377 - 0.398328I$ $a = 1.213060 - 0.011016I$ $b = 0.114689 + 1.009800I$	$0.55804 + 1.39773I$	$4.97891 - 5.04482I$
$u = 0.350200 + 0.158260I$ $a = 0.126066 - 0.674384I$ $b = -0.17853 - 2.29857I$	$2.11725 + 2.35876I$	$-9.10328 + 7.61988I$
$u = 0.350200 - 0.158260I$ $a = 0.126066 + 0.674384I$ $b = -0.17853 + 2.29857I$	$2.11725 - 2.35876I$	$-9.10328 - 7.61988I$
$u = -0.246546 + 0.282002I$ $a = -2.25461 + 0.06127I$ $b = -0.772232 + 0.632114I$	$-0.19554 + 2.59737I$	$1.80279 - 1.62726I$
$u = -0.246546 - 0.282002I$ $a = -2.25461 - 0.06127I$ $b = -0.772232 - 0.632114I$	$-0.19554 - 2.59737I$	$1.80279 + 1.62726I$
$u = 1.72565 + 0.13500I$ $a = -0.229827 + 0.251060I$ $b = -0.214921 - 0.081832I$	$-4.67108 + 1.62217I$	0
$u = 1.72565 - 0.13500I$ $a = -0.229827 - 0.251060I$ $b = -0.214921 + 0.081832I$	$-4.67108 - 1.62217I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{60} + u^{59} + \cdots - 2u + 1$
c_2	$u^{60} + 25u^{59} + \cdots + 6u + 1$
c_3	$u^{60} - 3u^{59} + \cdots - 4u + 1$
c_5, c_9	$u^{60} - u^{59} + \cdots + 5u^2 + 1$
c_6	$u^{60} - 13u^{59} + \cdots - 46u - 1$
c_7, c_{10}, c_{11}	$u^{60} + 5u^{59} + \cdots + 5u^2 + 1$
c_8	$u^{60} + 17u^{59} + \cdots + 288u + 79$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{60} + 25y^{59} + \cdots + 6y + 1$
c_2	$y^{60} + 21y^{59} + \cdots + 62y + 1$
c_3	$y^{60} + 5y^{59} + \cdots + 30y + 1$
c_5, c_9	$y^{60} - 43y^{59} + \cdots + 10y + 1$
c_6	$y^{60} + 109y^{59} + \cdots - 2526y + 1$
c_7, c_{10}, c_{11}	$y^{60} - 59y^{59} + \cdots + 10y + 1$
c_8	$y^{60} + 73y^{59} + \cdots - 15478y + 6241$