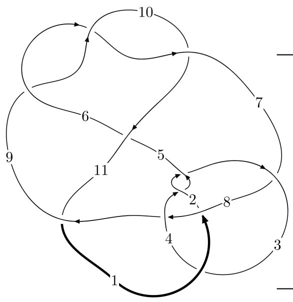
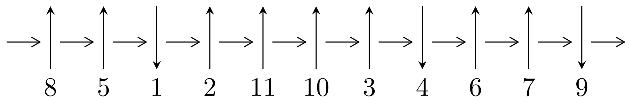
$11a_{261}$ $(K11a_{261})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -5.81838 \times 10^{20} u^{64} + 3.28868 \times 10^{20} u^{63} + \cdots + 3.16246 \times 10^{20} b + 3.28868 \times 10^{20}, \\ & 2.56145 \times 10^{20} u^{64} + 1.23301 \times 10^{20} u^{63} + \cdots + 4.74369 \times 10^{20} a + 1.66504 \times 10^{21},\ u^{65} - 2u^{64} + \cdots - 5u + 1\rangle \\ I_2^u = \langle & b - 1,\ a + 1,\ u - 1\rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 66 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.

$$I_1^u = \langle -5.82\times10^{20}u^{64}+3.29\times10^{20}u^{63}+\cdots+3.16\times10^{20}b+3.29\times10^{20},\ 2.56\times10^{20}u^{64}+1.23\times10^{20}u^{63}+\cdots+4.74\times10^{20}a+1.67\times10^{21},\ u^{65}-2u^{64}+\cdots-5u+1\rangle$$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ -u^3+u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^2+1 \\ u^4-2u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^4+u^2+1 \\ u^4-2u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.539970u^{64}-0.259927u^{63}+\cdots-1.96576u-3.51002 \\ 1.83982u^{64}-1.03991u^{63}+\cdots+6.70956u-1.03991 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.573322u^{64}-0.227294u^{63}+\cdots-0.674829u-3.39334 \\ 2.04123u^{64}-1.24062u^{63}+\cdots+7.59641u-1.24062 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^5+2u^3-u \\ u^7-3u^5+2u^3+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1.65099u^{64}-0.842590u^{63}+\cdots+10.1209u+2.47153 \\ -2.24504u^{64}+1.44254u^{63}+\cdots-7.30269u+1.44504 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.606671u^{64}+0.193473u^{63}+\cdots-0.0581858u+3.37667 \\ -2.24028u^{64}+1.44014u^{63}+\cdots-7.57737u+1.44014 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.606671u^{64}+0.193473u^{63}+\cdots-0.0581858u+3.37667 \\ -2.24028u^{64}+1.44014u^{63}+\cdots-7.57737u+1.44014 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1129105924074689745576}{158123107034570359949}u^{64} - \frac{1258714178007543158198}{158123107034570359949}u^{63} + \cdots + \frac{588387646096197968 66}{3364321426267454467}u - \frac{2815660831913924059 96}{158123107034570359949}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{65} - 4u^{64} + \cdots - u + 1$
c_2, c_4	$u^{65} + 2u^{64} + \cdots - 3u + 1$
c_3	$u^{65} - 11u^{64} + \cdots + 6u - 2$
c_5	$u^{65} + 3u^{64} + \cdots - 288u + 288$
c_6, c_9, c_{10}	$u^{65} - 2u^{64} + \cdots - 5u + 1$
c_7	$u^{65} + 18u^{63} + \cdots - 5599u + 599$
c_8	$u^{65} - 2u^{64} + \cdots + 875u + 199$
c_{11}	$u^{65} - 12u^{64} + \cdots + 15361u - 937$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{65} - 12y^{64} + \cdots + 5y - 1$
c_2, c_4	$y^{65} - 48y^{64} + \cdots + 65y - 1$
c_3	$y^{65} + 9y^{64} + \cdots - 32y - 4$
c_5	$y^{65} - 15y^{64} + \cdots + 2689344y - 82944$
c_6, c_9, c_{10}	$y^{65} - 60y^{64} + \cdots + 5y - 1$
c_7	$y^{65} + 36y^{64} + \cdots + 25490581y - 358801$
c_8	$y^{65} + 76y^{64} + \cdots + 46837y - 39601$
c_{11}	$y^{65} + 40y^{64} + \cdots + 64331905y - 877969$

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.678260 + 0.569072I$ $a = -0.016122 + 0.492515I$ $b = 0.137240 - 0.682876I$	$4.77180 + 0.79551I$	$17.2605 - 1.0216I$
$u = 0.678260 - 0.569072I$ $a = -0.016122 - 0.492515I$ $b = 0.137240 + 0.682876I$	$4.77180 - 0.79551I$	$17.2605 + 1.0216I$
$u = 1.14092$ $a = -0.115125$ $b = 0.758312$	1.93638	0
$u = 0.382954 + 0.760163I$ $a = 0.794021 + 0.280590I$ $b = 0.046721 - 0.656714I$	$3.78970 + 3.79443I$	$12.5834 - 7.8440I$
$u = 0.382954 - 0.760163I$ $a = 0.794021 - 0.280590I$ $b = 0.046721 + 0.656714I$	$3.78970 - 3.79443I$	$12.5834 + 7.8440I$
$u = 1.125870 + 0.332132I$ $a = -0.689757 + 0.119579I$ $b = 0.687361 + 0.619577I$	$2.88797 - 1.12159I$	0
$u = 1.125870 - 0.332132I$ $a = -0.689757 - 0.119579I$ $b = 0.687361 - 0.619577I$	$2.88797 + 1.12159I$	0
$u = -0.614901 + 0.535330I$ $a = -0.761912 + 0.631452I$ $b = 0.88334 - 1.27623I$	$5.66757 + 7.97706I$	$9.36287 - 3.39629I$
$u = -0.614901 - 0.535330I$ $a = -0.761912 - 0.631452I$ $b = 0.88334 + 1.27623I$	$5.66757 - 7.97706I$	$9.36287 + 3.39629I$
$u = -0.366460 + 0.727085I$ $a = -1.42890 + 1.39175I$ $b = -0.95536 - 1.32953I$	$4.76852 - 12.28510I$	$7.44035 + 8.76560I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.366460-0.727085I$ $a=-1.42890-1.39175I$ $b=-0.95536+1.32953I$	$4.76852+12.28510I$	$7.44035-8.76560I$
$u=-1.191650+0.175560I$ $a=-0.880003+0.405987I$ $b=-0.699401-0.545647I$	$0.37120-4.07451I$	0
$u=-1.191650-0.175560I$ $a=-0.880003-0.405987I$ $b=-0.699401+0.545647I$	$0.37120+4.07451I$	0
$u=1.235000+0.041141I$ $a=-0.79341-1.31957I$ $b=0.31476+2.40619I$	$3.95963+0.42107I$	0
$u=1.235000-0.041141I$ $a=-0.79341+1.31957I$ $b=0.31476-2.40619I$	$3.95963-0.42107I$	0
$u=0.049713+0.754423I$ $a=-0.714482+0.300281I$ $b=-0.855140+0.797416I$	$-0.40517+5.06438I$	$3.95497-7.18299I$
$u=0.049713-0.754423I$ $a=-0.714482-0.300281I$ $b=-0.855140-0.797416I$	$-0.40517-5.06438I$	$3.95497+7.18299I$
$u=-0.339899+0.663108I$ $a=1.64239-1.16141I$ $b=0.781935+0.829638I$	$0.09522-6.44593I$	$5.03058+9.01119I$
$u=-0.339899-0.663108I$ $a=1.64239+1.16141I$ $b=0.781935-0.829638I$	$0.09522+6.44593I$	$5.03058-9.01119I$
$u=-1.235770+0.297333I$ $a=0.406289-1.235280I$ $b=0.943698+0.958823I$	$3.56058-8.86995I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.235770 - 0.297333I$ $a = 0.406289 + 1.235280I$ $b = 0.943698 - 0.958823I$	$3.56058 + 8.86995I$	0
$u = -0.380812 + 0.610143I$ $a = 0.06444 + 1.61329I$ $b = -0.058355 - 0.809391I$	$4.44968 - 3.80628I$	$12.2239 + 7.2828I$
$u = -0.380812 - 0.610143I$ $a = 0.06444 - 1.61329I$ $b = -0.058355 + 0.809391I$	$4.44968 + 3.80628I$	$12.2239 - 7.2828I$
$u = -1.288300 + 0.091889I$ $a = 0.31534 - 2.36850I$ $b = 0.348122 + 0.973758I$	$5.10270 - 3.01321I$	0
$u = -1.288300 - 0.091889I$ $a = 0.31534 + 2.36850I$ $b = 0.348122 - 0.973758I$	$5.10270 + 3.01321I$	0
$u = 1.283700 + 0.210832I$ $a = 0.005363 - 0.773420I$ $b = -0.480767 - 0.212588I$	$1.09839 + 1.94254I$	0
$u = 1.283700 - 0.210832I$ $a = 0.005363 + 0.773420I$ $b = -0.480767 + 0.212588I$	$1.09839 - 1.94254I$	0
$u = -0.419028 + 0.549280I$ $a = -1.77640 + 1.52917I$ $b = 0.042992 - 0.667229I$	$4.67294 + 0.09706I$	$13.36415 + 0.53030I$
$u = -0.419028 - 0.549280I$ $a = -1.77640 - 1.52917I$ $b = 0.042992 + 0.667229I$	$4.67294 - 0.09706I$	$13.36415 - 0.53030I$
$u = 0.301362 + 0.621548I$ $a = -0.934672 - 0.857687I$ $b = -0.837815 + 0.659025I$	$0.29568 + 2.24337I$	$4.30616 - 2.82871I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.301362 - 0.621548I$ $a = -0.934672 + 0.857687I$ $b = -0.837815 - 0.659025I$	$0.29568 - 2.24337I$	$4.30616 + 2.82871I$
$u = -1.31305$ $a = 2.73258$ $b = -0.192967$	6.69568	0
$u = -0.492722 + 0.447883I$ $a = -0.018732 - 0.417872I$ $b = -0.662214 + 0.833663I$	$0.86536 + 2.71020I$	$7.15754 - 3.04555I$
$u = -0.492722 - 0.447883I$ $a = -0.018732 + 0.417872I$ $b = -0.662214 - 0.833663I$	$0.86536 - 2.71020I$	$7.15754 + 3.04555I$
$u = 0.345537 + 0.561912I$ $a = 3.53045 + 1.22785I$ $b = -0.07014 - 3.28534I$	$2.29780 + 1.66494I$	$-17.5253 + 6.6293I$
$u = 0.345537 - 0.561912I$ $a = 3.53045 - 1.22785I$ $b = -0.07014 + 3.28534I$	$2.29780 - 1.66494I$	$-17.5253 - 6.6293I$
$u = -0.051518 + 0.628248I$ $a = 1.04887 - 0.98256I$ $b = 0.564358 - 0.403906I$	$-3.01841 + 1.08766I$	$-2.25646 - 1.14539I$
$u = -0.051518 - 0.628248I$ $a = 1.04887 + 0.98256I$ $b = 0.564358 + 0.403906I$	$-3.01841 - 1.08766I$	$-2.25646 + 1.14539I$
$u = -1.41925 + 0.19367I$ $a = 1.52410 - 1.19809I$ $b = -0.66039 + 1.31268I$	$6.55173 - 3.43032I$	0
$u = -1.41925 - 0.19367I$ $a = 1.52410 + 1.19809I$ $b = -0.66039 - 1.31268I$	$6.55173 + 3.43032I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.358057 + 0.432304I$ $a = -0.856983 + 0.012393I$ $b = 0.337227 + 0.939608I$	$0.927115 + 0.969009I$	$7.33388 - 5.10467I$
$u = 0.358057 - 0.432304I$ $a = -0.856983 - 0.012393I$ $b = 0.337227 - 0.939608I$	$0.927115 - 0.969009I$	$7.33388 + 5.10467I$
$u = -1.42039 + 0.24290I$ $a = -0.13396 - 1.83660I$ $b = 1.027690 + 0.777107I$	$5.81492 - 5.42387I$	0
$u = -1.42039 - 0.24290I$ $a = -0.13396 + 1.83660I$ $b = 1.027690 - 0.777107I$	$5.81492 + 5.42387I$	0
$u = -1.43036 + 0.22015I$ $a = -2.83053 + 4.42260I$ $b = -0.01146 - 3.25716I$	$7.99318 - 4.57389I$	0
$u = -1.43036 - 0.22015I$ $a = -2.83053 - 4.42260I$ $b = -0.01146 + 3.25716I$	$7.99318 + 4.57389I$	0
$u = 1.43947 + 0.17545I$ $a = -0.61970 - 1.47828I$ $b = 0.652456 + 0.963631I$	$6.93022 - 0.40426I$	0
$u = 1.43947 - 0.17545I$ $a = -0.61970 + 1.47828I$ $b = 0.652456 - 0.963631I$	$6.93022 + 0.40426I$	0
$u = 1.43628 + 0.25338I$ $a = -0.74240 - 2.08871I$ $b = -0.828861 + 0.874237I$	$5.79461 + 9.79626I$	0
$u = 1.43628 - 0.25338I$ $a = -0.74240 + 2.08871I$ $b = -0.828861 - 0.874237I$	$5.79461 - 9.79626I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.44643 + 0.20811I$ $a = 1.52474 + 1.92775I$ $b = 0.076180 - 0.648466I$	$10.64080 + 2.70423I$	0
$u = 1.44643 - 0.20811I$ $a = 1.52474 - 1.92775I$ $b = 0.076180 + 0.648466I$	$10.64080 - 2.70423I$	0
$u = 1.44458 + 0.23052I$ $a = 0.00727 + 2.22521I$ $b = -0.008684 - 0.861520I$	$10.31070 + 6.89598I$	0
$u = 1.44458 - 0.23052I$ $a = 0.00727 - 2.22521I$ $b = -0.008684 + 0.861520I$	$10.31070 - 6.89598I$	0
$u = 1.45377 + 0.27698I$ $a = 0.60639 + 2.76642I$ $b = 0.97235 - 1.38618I$	$10.6167 + 15.9423I$	0
$u = 1.45377 - 0.27698I$ $a = 0.60639 - 2.76642I$ $b = 0.97235 + 1.38618I$	$10.6167 - 15.9423I$	0
$u = -1.46439 + 0.28501I$ $a = -0.788256 + 1.075800I$ $b = -0.145502 - 0.724051I$	$9.73502 - 7.58811I$	0
$u = -1.46439 - 0.28501I$ $a = -0.788256 - 1.075800I$ $b = -0.145502 + 0.724051I$	$9.73502 + 7.58811I$	0
$u = 1.49064 + 0.14963I$ $a = 1.32087 + 1.93888I$ $b = -0.77806 - 1.33217I$	$12.49300 - 5.62787I$	0
$u = 1.49064 - 0.14963I$ $a = 1.32087 - 1.93888I$ $b = -0.77806 + 1.33217I$	$12.49300 + 5.62787I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.50530+0.13452I$ $a=\ \ 0.26995+1.42007I$ $b=-0.180993-0.917016I$	$11.93110-3.09362I$	0
$u=-1.50530-0.13452I$ $a=\ \ 0.26995-1.42007I$ $b=-0.180993+0.917016I$	$11.93110+3.09362I$	0
$u=\ \ 0.113883+0.422940I$ $a=-1.56859-0.39304I$ $b=-0.431618+1.169140I$	$0.92611+1.21767I$	$5.78394-3.84378I$
$u=\ \ 0.113883-0.422940I$ $a=-1.56859+0.39304I$ $b=-0.431618-1.169140I$	$0.92611-1.21767I$	$5.78394+3.84378I$
$u=\ \ 0.242610$ $a=-5.62882$ $b=\ \ 1.13132$	2.24319	1.34300

II. $I_2^u = \langle b - 1,\ a + 1,\ u - 1\rangle$

(i) Arc colorings

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

$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_{10} = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_{11} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

$a_1 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

$a_4 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$

$a_3 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$

$a_5 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

$a_8 = \begin{pmatrix} 2 \\ -1 \end{pmatrix}$

$a_2 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

$a_2 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_8 c_9, c_{10}, c_{11}	$y - 1$
c_3, c_5	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -1.00000$ $b = 1.00000$	3.28987	12.0000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^{65}-4u^{64}+\cdots-u+1)$
c_2	$(u+1)(u^{65}+2u^{64}+\cdots-3u+1)$
c_3	$u(u^{65}-11u^{64}+\cdots+6u-2)$
c_4	$(u-1)(u^{65}+2u^{64}+\cdots-3u+1)$
c_5	$u(u^{65}+3u^{64}+\cdots-288u+288)$
c_6	$(u+1)(u^{65}-2u^{64}+\cdots-5u+1)$
c_7	$(u-1)(u^{65}+18u^{63}+\cdots-5599u+599)$
c_8	$(u-1)(u^{65}-2u^{64}+\cdots+875u+199)$
c_9, c_{10}	$(u-1)(u^{65}-2u^{64}+\cdots-5u+1)$
c_{11}	$(u-1)(u^{65}-12u^{64}+\cdots+15361u-937)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^{65} - 12y^{64} + \cdots + 5y - 1)$
c_2, c_4	$(y-1)(y^{65} - 48y^{64} + \cdots + 65y - 1)$
c_3	$y(y^{65} + 9y^{64} + \cdots - 32y - 4)$
c_5	$y(y^{65} - 15y^{64} + \cdots + 2689344y - 82944)$
c_6, c_9, c_{10}	$(y-1)(y^{65} - 60y^{64} + \cdots + 5y - 1)$
c_7	$(y-1)(y^{65} + 36y^{64} + \cdots + 2.54906 \times 10^7 y - 358801)$
c_8	$(y-1)(y^{65} + 76y^{64} + \cdots + 46837y - 39601)$
c_{11}	$(y-1)(y^{65} + 40y^{64} + \cdots + 6.43319 \times 10^7 y - 877969)$