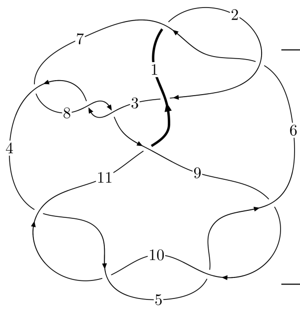
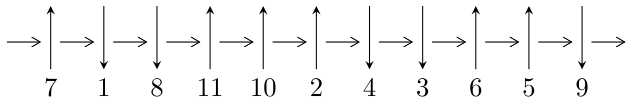
$11a_{201}$ ($K11a_{201}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 4375317u^{31} - 2433496u^{30} + \cdots + 413102810b + 29259312,$$
$$497615779u^{31} + 479325734u^{30} + \cdots + 826205620a + 3336436539,\ u^{32} + u^{31} + \cdots + 6u + 5\rangle$$
$$I_2^u = \langle b - u,\ a - u,\ u^{12} + 4u^{10} - u^9 + 6u^8 - 3u^7 + 5u^6 - 3u^5 + 3u^4 - u^3 + u^2 + 1\rangle$$
$$I_3^u = \langle b - u,\ a^2 - 2au + a - u - 2,\ u^2 + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 48 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. $\boldsymbol{I_1^u = \langle 4.38 \times 10^6 u^{31} - 2.43 \times 10^6 u^{30} + \cdots + 4.13 \times 10^7 b + 2.93 \times 10^7,\ 4.98 \times 10^8 u^{31} + 4.79 \times 10^8 u^{30} + \cdots + 8.26 \times 10^8 a + 3.34 \times 10^9,\ u^{32} + u^{31} + \cdots + 6u + 5\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} -0.602290u^{31} - 0.580153u^{30} + \cdots + 1.15611u - 4.03826 \\ -0.105914u^{31} + 0.0589078u^{30} + \cdots + 0.0313659u - 0.708282 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -0.496377u^{31} - 0.639061u^{30} + \cdots + 1.12474u - 3.32998 \\ -0.105914u^{31} + 0.0589078u^{30} + \cdots + 0.0313659u - 0.708282 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.119519u^{31} - 0.242713u^{30} + \cdots - 1.19552u - 3.13015 \\ -0.164821u^{31} - 0.336590u^{30} + \cdots + 0.0728005u - 1.52957 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.674669u^{31} - 0.189419u^{30} + \cdots + 2.00688u - 3.69475 \\ -0.0228362u^{31} - 0.319476u^{30} + \cdots - 0.115047u - 2.13688 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.479860u^{31} + 0.593758u^{30} + \cdots - 4.21292u + 4.09540 \\ 0.222814u^{31} - 0.00541149u^{30} + \cdots - 3.26130u + 2.60177 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.216037u^{31} - 0.00644846u^{30} + \cdots + 0.896572u - 2.42097 \\ 0.216748u^{31} + 0.489956u^{30} + \cdots + 0.135123u - 0.963031 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.216037u^{31} - 0.00644846u^{30} + \cdots + 0.896572u - 2.42097 \\ 0.216748u^{31} + 0.489956u^{30} + \cdots + 0.135123u - 0.963031 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{5988531}{41310281}u^{31} - \frac{30382789}{41310281}u^{30} + \cdots - \frac{272513748}{41310281}u - \frac{494571835}{41310281}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{32} + u^{31} + \cdots + 4u + 5$
c_2	$u^{32} + 13u^{31} + \cdots + 274u + 25$
c_3, c_7, c_8	$u^{32} + u^{31} + \cdots + 6u + 5$
c_4, c_5, c_9 c_{10}	$u^{32} + 2u^{31} + \cdots + 5u + 2$
c_{11}	$u^{32} - 8u^{31} + \cdots - 91u + 136$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{32} + 13y^{31} + \cdots + 274y + 25$
c_2	$y^{32} + 17y^{31} + \cdots + 3174y + 625$
c_3, c_7, c_8	$y^{32} + 33y^{31} + \cdots - 206y + 25$
c_4, c_5, c_9 c_{10}	$y^{32} + 36y^{31} + \cdots + 19y + 4$
c_{11}	$y^{32} + 8y^{30} + \cdots + 159543y + 18496$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.551100 + 0.734939I$ $a = 0.107390 + 1.226730I$ $b = -0.591788 + 0.593098I$	$-5.67221 - 1.34508I$	$-0.32319 + 3.71865I$
$u = 0.551100 - 0.734939I$ $a = 0.107390 - 1.226730I$ $b = -0.591788 - 0.593098I$	$-5.67221 + 1.34508I$	$-0.32319 - 3.71865I$
$u = -0.875527 + 0.268870I$ $a = -0.16524 + 2.17598I$ $b = 0.579991 + 1.106900I$	$-8.94868 + 8.17553I$	$-4.60823 - 6.25670I$
$u = -0.875527 - 0.268870I$ $a = -0.16524 - 2.17598I$ $b = 0.579991 - 1.106900I$	$-8.94868 - 8.17553I$	$-4.60823 + 6.25670I$
$u = 0.784850 + 0.315450I$ $a = 0.29529 + 2.03118I$ $b = -0.548702 + 1.030460I$	$-1.40224 - 5.85456I$	$-1.92239 + 8.44410I$
$u = 0.784850 - 0.315450I$ $a = 0.29529 - 2.03118I$ $b = -0.548702 - 1.030460I$	$-1.40224 + 5.85456I$	$-1.92239 - 8.44410I$
$u = -0.638976 + 0.376897I$ $a = -0.49487 + 1.75535I$ $b = 0.482595 + 0.918929I$	$-0.22348 + 2.37773I$	$1.52399 - 3.08946I$
$u = -0.638976 - 0.376897I$ $a = -0.49487 - 1.75535I$ $b = 0.482595 - 0.918929I$	$-0.22348 - 2.37773I$	$1.52399 + 3.08946I$
$u = -0.135432 + 1.257600I$ $a = 1.98986 - 0.02746I$ $b = -0.422506 - 0.889378I$	$-7.83825 + 1.73312I$	$-0.29629 - 4.34437I$
$u = -0.135432 - 1.257600I$ $a = 1.98986 + 0.02746I$ $b = -0.422506 + 0.889378I$	$-7.83825 - 1.73312I$	$-0.29629 + 4.34437I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.170928+0.653284I$ $a=-0.210272+0.793110I$ $b=\ \ 0.184737+0.516971I$	$0.317055+1.041090I$	$4.08687-7.01179I$
$u=-0.170928-0.653284I$ $a=-0.210272-0.793110I$ $b=\ \ 0.184737-0.516971I$	$0.317055-1.041090I$	$4.08687+7.01179I$
$u=\ \ 0.138560+1.382420I$ $a=-1.208030-0.407595I$ $b=\ \ 0.611494-0.902238I$	$1.47357-2.48254I$	$0.77846+2.31990I$
$u=\ \ 0.138560-1.382420I$ $a=-1.208030+0.407595I$ $b=\ \ 0.611494+0.902238I$	$1.47357+2.48254I$	$0.77846-2.31990I$
$u=\ \ 0.11167+1.45794I$ $a=\ \ 0.322969+0.098145I$ $b=-0.836425-0.572540I$	$7.07545+0.03254I$	$6.68754-2.41599I$
$u=\ \ 0.11167-1.45794I$ $a=\ \ 0.322969-0.098145I$ $b=-0.836425+0.572540I$	$7.07545-0.03254I$	$6.68754+2.41599I$
$u=-0.19688+1.45123I$ $a=-0.142970+0.223499I$ $b=\ \ 0.888417-0.454350I$	$6.27640+4.08548I$	$4.92629-3.95232I$
$u=-0.19688-1.45123I$ $a=-0.142970-0.223499I$ $b=\ \ 0.888417+0.454350I$	$6.27640-4.08548I$	$4.92629+3.95232I$
$u=-0.23997+1.44565I$ $a=\ \ 1.055980-0.926944I$ $b=-0.674652-1.050250I$	$5.62992+5.59260I$	$4.88199-3.14064I$
$u=-0.23997-1.44565I$ $a=\ \ 1.055980+0.926944I$ $b=-0.674652+1.050250I$	$5.62992-5.59260I$	$4.88199+3.14064I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.518541+0.098182I$ $a=-1.13760-3.26930I$ $b=\ \ 0.224351-1.142550I$	$-11.37260+0.54600I$	$-8.69124+0.03376I$
$u=-0.518541-0.098182I$ $a=-1.13760+3.26930I$ $b=\ \ 0.224351+1.142550I$	$-11.37260-0.54600I$	$-8.69124-0.03376I$
$u=\ \ 0.27546+1.44706I$ $a=-0.003952+0.310620I$ $b=-0.944505-0.352972I$	$-0.98639-6.83283I$	$1.75203+3.32072I$
$u=\ \ 0.27546-1.44706I$ $a=-0.003952-0.310620I$ $b=-0.944505+0.352972I$	$-0.98639+6.83283I$	$1.75203-3.32072I$
$u=\ \ 0.02294+1.47346I$ $a=-0.614412-0.215049I$ $b=\ \ 0.781589-0.768693I$	$1.77631-2.78949I$	$2.31170+3.04495I$
$u=\ \ 0.02294-1.47346I$ $a=-0.614412+0.215049I$ $b=\ \ 0.781589+0.768693I$	$1.77631+2.78949I$	$2.31170-3.04495I$
$u=\ \ 0.30286+1.44432I$ $a=-1.07271-1.17133I$ $b=\ \ 0.660399-1.126280I$	$4.24750-9.79490I$	$1.90027+8.12544I$
$u=\ \ 0.30286-1.44432I$ $a=-1.07271+1.17133I$ $b=\ \ 0.660399+1.126280I$	$4.24750+9.79490I$	$1.90027-8.12544I$
$u=-0.35408+1.43602I$ $a=\ \ 1.08498-1.36239I$ $b=-0.641332-1.184000I$	$-3.50806+12.60760I$	$-1.01142-7.01526I$
$u=-0.35408-1.43602I$ $a=\ \ 1.08498+1.36239I$ $b=-0.641332+1.184000I$	$-3.50806-12.60760I$	$-1.01142+7.01526I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.442891 + 0.103566I$ $a = 1.59360 + 2.25219I$ $b = -0.253664 + 1.015980I$	$-3.29365 - 0.43865I$	$-7.99639 - 0.07898I$
$u = 0.442891 - 0.103566I$ $a = 1.59360 - 2.25219I$ $b = -0.253664 - 1.015980I$	$-3.29365 + 0.43865I$	$-7.99639 + 0.07898I$

II. $I_2^u = \langle b - u,\ a - u,\ u^{12} + 4u^{10} + \cdots + u^2 + 1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^8 + 3u^6 + 3u^4 + 2u^2 + 1 \\ u^8 + 2u^6 + 2u^4 + 2u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{11} + 4u^9 + 6u^7 + 4u^5 + u^3 \\ u^{11} + u^{10} + 3u^9 + 3u^8 + 3u^7 + 3u^6 + u^5 + u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^5 + 2u^3 + u \\ u^7 + 3u^5 + 2u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^5 + 2u^3 + u \\ u^7 + 3u^5 + 2u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^6 + 8u^4 - 4u^3 + 4u^2 - 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_6 c_7, c_8	$u^{12} + 4u^{10} - u^9 + 6u^8 - 3u^7 + 5u^6 - 3u^5 + 3u^4 - u^3 + u^2 + 1$
c_2	$u^{12} + 8u^{11} + \cdots + 2u + 1$
c_4, c_5, c_9 c_{10}	$(u^4 - u^3 + 3u^2 - 2u + 1)^3$
c_{11}	$(u^4 - u^3 + u^2 + 1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_6 c_7, c_8	$y^{12} + 8y^{11} + \cdots + 2y + 1$
c_2	$y^{12} - 8y^{11} + \cdots + 10y + 1$
c_4, c_5, c_9 c_{10}	$(y^4 + 5y^3 + 7y^2 + 2y + 1)^3$
c_{11}	$(y^4 + y^3 + 3y^2 + 2y + 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.427976 + 0.817556I$ $a = 0.427976 + 0.817556I$ $b = 0.427976 + 0.817556I$	$0.21101 + 1.41510I$	$1.82674 - 4.90874I$
$u = 0.427976 - 0.817556I$ $a = 0.427976 - 0.817556I$ $b = 0.427976 - 0.817556I$	$0.21101 - 1.41510I$	$1.82674 + 4.90874I$
$u = -0.543763 + 0.976761I$ $a = -0.543763 + 0.976761I$ $b = -0.543763 + 0.976761I$	$-6.79074 - 3.16396I$	$-1.82674 + 2.56480I$
$u = -0.543763 - 0.976761I$ $a = -0.543763 - 0.976761I$ $b = -0.543763 - 0.976761I$	$-6.79074 + 3.16396I$	$-1.82674 - 2.56480I$
$u = 0.739694 + 0.363125I$ $a = 0.739694 + 0.363125I$ $b = 0.739694 + 0.363125I$	$-6.79074 - 3.16396I$	$-1.82674 + 2.56480I$
$u = 0.739694 - 0.363125I$ $a = 0.739694 - 0.363125I$ $b = 0.739694 - 0.363125I$	$-6.79074 + 3.16396I$	$-1.82674 - 2.56480I$
$u = 0.093076 + 1.263390I$ $a = 0.093076 + 1.263390I$ $b = 0.093076 + 1.263390I$	$0.21101 - 1.41510I$	$1.82674 + 4.90874I$
$u = 0.093076 - 1.263390I$ $a = 0.093076 - 1.263390I$ $b = 0.093076 - 1.263390I$	$0.21101 + 1.41510I$	$1.82674 - 4.90874I$
$u = -0.521051 + 0.445835I$ $a = -0.521051 + 0.445835I$ $b = -0.521051 + 0.445835I$	$0.21101 + 1.41510I$	$1.82674 - 4.90874I$
$u = -0.521051 - 0.445835I$ $a = -0.521051 - 0.445835I$ $b = -0.521051 - 0.445835I$	$0.21101 - 1.41510I$	$1.82674 + 4.90874I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.195931 + 1.339890I$ $a = -0.195931 + 1.339890I$ $b = -0.195931 + 1.339890I$	$-6.79074 + 3.16396I$	$-1.82674 - 2.56480I$
$u = -0.195931 - 1.339890I$ $a = -0.195931 - 1.339890I$ $b = -0.195931 - 1.339890I$	$-6.79074 - 3.16396I$	$-1.82674 + 2.56480I$

III. $I_3^u = \langle b-u,\ a^2-2au+a-u-2,\ u^2+1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_6 c_7, c_8	$(u^2+1)^2$
c_2	$(u+1)^4$
c_4, c_5, c_9 c_{10}	u^4+3u^2+1
c_{11}	$(u^2-u-1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_6 c_7, c_8	$(y+1)^4$
c_2	$(y-1)^4$
c_4, c_5, c_9 c_{10}	$(y^2+3y+1)^2$
c_{11}	$(y^2-3y+1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = 0.618034 + 1.000000I$ $b = 1.000000I$	-0.986960	-4.00000
$u = 1.000000I$ $a = -1.61803 + 1.00000I$ $b = 1.000000I$	-8.88264	-4.00000
$u = -1.000000I$ $a = 0.618034 - 1.000000I$ $b = -1.000000I$	-0.986960	-4.00000
$u = -1.000000I$ $a = -1.61803 - 1.00000I$ $b = -1.000000I$	-8.88264	-4.00000

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^2+1)^2(u^{12}+4u^{10}-u^9+6u^8-3u^7+5u^6-3u^5+3u^4-u^3+u^2+1)$ $\cdot(u^{32}+u^{31}+\cdots+4u+5)$
c_2	$((u+1)^4)(u^{12}+8u^{11}+\cdots+2u+1)(u^{32}+13u^{31}+\cdots+274u+25)$
c_3, c_7, c_8	$(u^2+1)^2(u^{12}+4u^{10}-u^9+6u^8-3u^7+5u^6-3u^5+3u^4-u^3+u^2+1)$ $\cdot(u^{32}+u^{31}+\cdots+6u+5)$
c_4, c_5, c_9 c_{10}	$(u^4+3u^2+1)(u^4-u^3+3u^2-2u+1)^3(u^{32}+2u^{31}+\cdots+5u+2)$
c_{11}	$((u^2-u-1)^2)(u^4-u^3+u^2+1)^3(u^{32}-8u^{31}+\cdots-91u+136)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$((y+1)^4)(y^{12}+8y^{11}+\cdots+2y+1)(y^{32}+13y^{31}+\cdots+274y+25)$
c_2	$((y-1)^4)(y^{12}-8y^{11}+\cdots+10y+1)(y^{32}+17y^{31}+\cdots+3174y+625)$
c_3, c_7, c_8	$((y+1)^4)(y^{12}+8y^{11}+\cdots+2y+1)(y^{32}+33y^{31}+\cdots-206y+25)$
c_4, c_5, c_9 c_{10}	$(y^2+3y+1)^2(y^4+5y^3+7y^2+2y+1)^3$ $\cdot\,(y^{32}+36y^{31}+\cdots+19y+4)$
c_{11}	$(y^2-3y+1)^2(y^4+y^3+3y^2+2y+1)^3$ $\cdot\,(y^{32}+8y^{30}+\cdots+159543y+18496)$