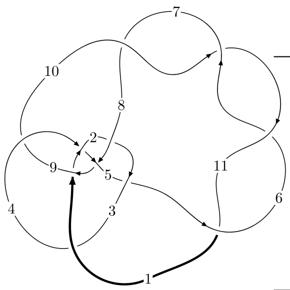
$11a_{249}$ $(K11a_{249})$



A knot diagram[1]

Linearized knot diagam

$$\rightarrow \underset{9}{\uparrow} \rightarrow \underset{8}{\downarrow} \rightarrow \underset{1}{\downarrow} \rightarrow \underset{2}{\uparrow} \rightarrow \underset{3}{\downarrow} \rightarrow \underset{11}{\uparrow} \rightarrow \underset{10}{\uparrow} \rightarrow \underset{5}{\uparrow} \rightarrow \underset{4}{\downarrow} \rightarrow \underset{7}{\uparrow} \rightarrow \underset{6}{\uparrow} \rightarrow$$

Solving Sequence

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

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

$$\begin{aligned}
I^u_1 &= \langle -2221u^{30} + 10362u^{29} + \cdots + 1483b + 12391,\ 16251u^{30} - 71483u^{29} + \cdots + 5932a - 87087,\\
&\quad u^{31} - 5u^{30} + \cdots - 29u + 4\rangle\\
I^u_2 &= \langle -u^{17}a + u^{18} + \cdots + b - a,\ -u^{18} - 2u^{17} + \cdots + a + 3,\ u^{19} + 3u^{18} + \cdots + 2u + 1\rangle\\
I^u_3 &= \langle -u^8 - 3u^7 - 8u^6 - 14u^5 - 18u^4 - 18u^3 - 12u^2 + b - 5u - 1,\\
&\quad u^{10} + 2u^9 + 8u^8 + 11u^7 + 20u^6 + 18u^5 + 16u^4 + 7u^3 - u^2 + a - 2u - 3,\\
&\quad u^{11} + 2u^{10} + 9u^9 + 14u^8 + 29u^7 + 34u^6 + 40u^5 + 33u^4 + 21u^3 + 11u^2 + 2u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 80 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. $\boldsymbol{I_1^u = \langle -2221u^{30} + 10362u^{29} + \cdots + 1483b + 12391,\ 16251u^{30} - 71483u^{29} + \cdots + 5932a - 87087,\ u^{31} - 5u^{30} + \cdots - 29u + 4\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -2.73955u^{30} + 12.0504u^{29} + \cdots - 82.3793u + 14.6809 \\ 1.49764u^{30} - 6.98719u^{29} + \cdots + 54.4889u - 8.35536 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2.08884u^{30} + 8.94656u^{29} + \cdots - 37.0260u + 6.08749 \\ 2.14835u^{30} - 10.0910u^{29} + \cdots + 99.8422u - 16.9488 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 3.62053u^{30} - 14.7615u^{29} + \cdots + 60.7468u - 11.9584 \\ -4.83884u^{30} + 22.6966u^{29} + \cdots - 198.526u + 33.8375 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.160991u^{30} + 0.195381u^{29} + \cdots + 25.2053u - 4.91925 \\ 1.19285u^{30} - 5.61834u^{29} + \cdots + 51.1949u - 8.53338 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 2.95499u^{30} - 13.1485u^{29} + \cdots + 127.609u - 25.1701 \\ -0.175320u^{30} + 1.38031u^{29} + \cdots - 36.5408u + 8.03034 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 2.95499u^{30} - 13.1485u^{29} + \cdots + 127.609u - 25.1701 \\ -0.175320u^{30} + 1.38031u^{29} + \cdots - 36.5408u + 8.03034 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{23165}{1483}u^{30} - \frac{107745}{1483}u^{29} + \cdots + \frac{898798}{1483}u - \frac{164430}{1483}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{31} - u^{30} + \cdots + u - 1$
c_2, c_9	$u^{31} - u^{29} + \cdots - u - 2$
c_3, c_5	$u^{31} + 4u^{30} + \cdots + 18u - 1$
c_4	$u^{31} + 18u^{30} + \cdots + 9u + 2$
c_6, c_7, c_{10} c_{11}	$u^{31} + 5u^{30} + \cdots - 29u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{31} + 13y^{30} + \cdots - 33y - 1$
c_2, c_9	$y^{31} - 2y^{30} + \cdots + 77y - 4$
c_3, c_5	$y^{31} - 26y^{30} + \cdots + 92y - 1$
c_4	$y^{31} + 36y^{29} + \cdots - 43y - 4$
c_6, c_7, c_{10} c_{11}	$y^{31} + 37y^{30} + \cdots - 39y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.569679 + 0.825244I$ $a = 0.183588 - 0.105883I$ $b = 0.10987 + 1.44314I$	$-2.69978 + 12.95640I$	$-0.23261 - 9.43614I$
$u = 0.569679 - 0.825244I$ $a = 0.183588 + 0.105883I$ $b = 0.10987 - 1.44314I$	$-2.69978 - 12.95640I$	$-0.23261 + 9.43614I$
$u = 0.446669 + 1.022060I$ $a = -0.229670 + 0.139677I$ $b = -0.763451 + 0.817856I$	$-3.95736 - 4.34211I$	$-3.34603 + 4.21375I$
$u = 0.446669 - 1.022060I$ $a = -0.229670 - 0.139677I$ $b = -0.763451 - 0.817856I$	$-3.95736 + 4.34211I$	$-3.34603 - 4.21375I$
$u = 0.400265 + 0.750186I$ $a = 0.330472 + 0.332431I$ $b = 0.07889 - 1.54454I$	$-3.65186 + 4.72376I$	$-6.73915 - 9.01491I$
$u = 0.400265 - 0.750186I$ $a = 0.330472 - 0.332431I$ $b = 0.07889 + 1.54454I$	$-3.65186 - 4.72376I$	$-6.73915 + 9.01491I$
$u = 0.430131 + 0.658488I$ $a = -0.183362 + 0.477511I$ $b = 0.737519 - 0.745039I$	$-3.38752 + 1.12904I$	$-5.86333 - 1.96216I$
$u = 0.430131 - 0.658488I$ $a = -0.183362 - 0.477511I$ $b = 0.737519 + 0.745039I$	$-3.38752 - 1.12904I$	$-5.86333 + 1.96216I$
$u = 0.767504 + 0.098303I$ $a = 1.176040 + 0.588359I$ $b = -0.313167 - 0.039847I$	$-0.50248 - 8.50614I$	$2.27465 + 6.40928I$
$u = 0.767504 - 0.098303I$ $a = 1.176040 - 0.588359I$ $b = -0.313167 + 0.039847I$	$-0.50248 + 8.50614I$	$2.27465 - 6.40928I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.293124+1.250360I$ $a=-0.339823+0.206438I$ $b=-0.252419+0.385898I$	$-2.27354-3.50893I$	$-5.54486+0.I$
$u=-0.293124-1.250360I$ $a=-0.339823-0.206438I$ $b=-0.252419-0.385898I$	$-2.27354+3.50893I$	$-5.54486+0.I$
$u=-0.679912$ $a=-0.416450$ $b=-0.222046$	1.65420	10.7790
$u=-0.030145+0.632324I$ $a=\ 1.47612+0.64299I$ $b=\ 0.885670-1.002800I$	$-2.68102-0.05226I$	$-6.06626-0.22401I$
$u=-0.030145-0.632324I$ $a=\ 1.47612-0.64299I$ $b=\ 0.885670+1.002800I$	$-2.68102+0.05226I$	$-6.06626+0.22401I$
$u=-0.365675+0.452743I$ $a=-0.797328+0.396666I$ $b=-0.210849+0.445374I$	$0.46001-1.35442I$	$4.73574+4.98058I$
$u=-0.365675-0.452743I$ $a=-0.797328-0.396666I$ $b=-0.210849-0.445374I$	$0.46001+1.35442I$	$4.73574-4.98058I$
$u=\ 0.479267+0.029288I$ $a=-1.56796-0.81793I$ $b=\ 0.522074+0.276654I$	$-1.59180-1.67665I$	$-1.00415+4.26501I$
$u=\ 0.479267-0.029288I$ $a=-1.56796+0.81793I$ $b=\ 0.522074-0.276654I$	$-1.59180+1.67665I$	$-1.00415-4.26501I$
$u=-0.05713+1.54134I$ $a=\ 0.344476+1.160950I$ $b=\ 0.86736+1.36084I$	$-6.26363-2.63858I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.05713 - 1.54134I$ $a = 0.344476 - 1.160950I$ $b = 0.86736 - 1.36084I$	$-6.26363 + 2.63858I$	0
$u = 0.14024 + 1.60199I$ $a = 1.00070 - 1.54731I$ $b = 0.97785 - 2.44893I$	$-11.09130 + 3.32383I$	0
$u = 0.14024 - 1.60199I$ $a = 1.00070 + 1.54731I$ $b = 0.97785 + 2.44893I$	$-11.09130 - 3.32383I$	0
$u = -0.01344 + 1.61665I$ $a = 0.56616 - 1.95531I$ $b = 0.12593 - 2.72063I$	$-10.59830 - 0.24605I$	0
$u = -0.01344 - 1.61665I$ $a = 0.56616 + 1.95531I$ $b = 0.12593 + 2.72063I$	$-10.59830 + 0.24605I$	0
$u = 0.11301 + 1.62464I$ $a = 0.20677 - 2.57593I$ $b = -0.41813 - 3.60494I$	$-11.79760 + 6.65579I$	0
$u = 0.11301 - 1.62464I$ $a = 0.20677 + 2.57593I$ $b = -0.41813 + 3.60494I$	$-11.79760 - 6.65579I$	0
$u = 0.16828 + 1.65275I$ $a = -0.20161 + 2.35706I$ $b = 0.26751 + 3.34164I$	$-11.1484 + 15.7970I$	0
$u = 0.16828 - 1.65275I$ $a = -0.20161 - 2.35706I$ $b = 0.26751 - 3.34164I$	$-11.1484 - 15.7970I$	0
$u = 0.08442 + 1.69812I$ $a = -0.63135 + 1.40530I$ $b = -0.50364 + 2.03004I$	$-13.53410 - 2.42013I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.08442 - 1.69812I$ $a = -0.63135 - 1.40530I$ $b = -0.50364 - 2.03004I$	$-13.53410 + 2.42013I$	0

II.

$$\boldsymbol{I^u_2 = \langle -u^{17}a+u^{18}+\cdots+b-a,\ -u^{18}-2u^{17}+\cdots+a+3,\ u^{19}+3u^{18}+\cdots+2u+1\rangle}$$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a \\ u^{17}a - u^{18} + \cdots + 2au + a \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{18}a - 3u^{17}a + \cdots - 2au + u \\ -u^{18}a - u^{18} + \cdots - 2u^2 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{15}a + u^{16} + \cdots - a + 2 \\ -u^{18} - 3u^{17} + \cdots - a - 2u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{16} + 2u^{15} + \cdots + a + 1 \\ -u^{17}a - u^{18} + \cdots - a + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{16} - 4u^{15} + \cdots - a - 1 \\ -u^{17}a + u^{18} + \cdots - a + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{16} - 4u^{15} + \cdots - a - 1 \\ -u^{17}a + u^{18} + \cdots - a + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{18} + 4u^{17} + 40u^{16} + 28u^{15} + 136u^{14} + 32u^{13} + 120u^{12} - 204u^{11} - 308u^{10} - 696u^9 - 780u^8 - 788u^7 - 596u^6 - 324u^5 - 172u^4 - 64u^3 - 36u^2 - 8u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{38} - 3u^{37} + \cdots + u + 2$
c_2, c_9	$u^{38} - u^{37} + \cdots - 20u + 1$
c_3, c_5	$u^{38} - u^{37} + \cdots - 35u - 44$
c_4	$(u^{19} - 9u^{18} + \cdots - 5u^2 + 1)^2$
c_6, c_7, c_{10} c_{11}	$(u^{19} - 3u^{18} + \cdots + 2u - 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{38} - 9y^{37} + \cdots + 59y + 4$
c_2, c_9	$y^{38} - 5y^{37} + \cdots - 114y + 1$
c_3, c_5	$y^{38} + 3y^{37} + \cdots - 35633y + 1936$
c_4	$(y^{19} - y^{18} + \cdots + 10y - 1)^2$
c_6, c_7, c_{10} c_{11}	$(y^{19} + 23y^{18} + \cdots - 10y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.564635+0.868645I$ $a=-0.327665+0.243134I$ $b=-0.152716+1.213210I$	$-1.04093-4.49011I$	$7.2217+12.2703I$
$u=-0.564635+0.868645I$ $a=-0.116530+0.236355I$ $b=\ \ 0.004197-0.674024I$	$-1.04093-4.49011I$	$7.2217+12.2703I$
$u=-0.564635-0.868645I$ $a=-0.327665-0.243134I$ $b=-0.152716-1.213210I$	$-1.04093+4.49011I$	$7.2217-12.2703I$
$u=-0.564635-0.868645I$ $a=-0.116530-0.236355I$ $b=\ \ 0.004197+0.674024I$	$-1.04093+4.49011I$	$7.2217-12.2703I$
$u=-0.283323+0.902263I$ $a=\ \ 0.785053+0.660864I$ $b=\ \ 0.80712+1.47925I$	$-3.51553-4.24269I$	$-6.97656+8.05146I$
$u=-0.283323+0.902263I$ $a=-0.111366+0.437497I$ $b=\ \ 0.380631-1.057340I$	$-3.51553-4.24269I$	$-6.97656+8.05146I$
$u=-0.283323-0.902263I$ $a=\ \ 0.785053-0.660864I$ $b=\ \ 0.80712-1.47925I$	$-3.51553+4.24269I$	$-6.97656-8.05146I$
$u=-0.283323-0.902263I$ $a=-0.111366-0.437497I$ $b=\ \ 0.380631+1.057340I$	$-3.51553+4.24269I$	$-6.97656-8.05146I$
$u=-0.787816$ $a=-0.876396$ $b=-0.116835$	1.57116	17.6350
$u=-0.787816$ $a=\ \ 0.131048$ $b=-0.319043$	1.57116	17.6350

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.520505 + 0.346350I$ $a = -0.254122 + 1.011080I$ $b = -0.565052 + 0.068015I$	$0.28629 - 1.78365I$	$6.84779 + 6.86635I$
$u = -0.520505 + 0.346350I$ $a = -1.295150 - 0.060725I$ $b = \quad 0.006015 + 0.732557I$	$0.28629 - 1.78365I$	$6.84779 + 6.86635I$
$u = -0.520505 - 0.346350I$ $a = -0.254122 - 1.011080I$ $b = -0.565052 - 0.068015I$	$0.28629 + 1.78365I$	$6.84779 - 6.86635I$
$u = -0.520505 - 0.346350I$ $a = -1.295150 + 0.060725I$ $b = \quad 0.006015 - 0.732557I$	$0.28629 + 1.78365I$	$6.84779 - 6.86635I$
$u = \quad 0.230003 + 0.578230I$ $a = -0.113241 - 0.764438I$ $b = -0.79066 - 1.82471I$	$0.35999 + 4.82230I$	$1.96421 - 11.27699I$
$u = \quad 0.230003 + 0.578230I$ $a = \quad 2.28059 + 0.47953I$ $b = -0.456332 - 0.059209I$	$0.35999 + 4.82230I$	$1.96421 - 11.27699I$
$u = \quad 0.230003 - 0.578230I$ $a = -0.113241 + 0.764438I$ $b = -0.79066 + 1.82471I$	$0.35999 - 4.82230I$	$1.96421 + 11.27699I$
$u = \quad 0.230003 - 0.578230I$ $a = \quad 2.28059 - 0.47953I$ $b = -0.456332 + 0.059209I$	$0.35999 - 4.82230I$	$1.96421 + 11.27699I$
$u = -0.00390 + 1.54662I$ $a = -0.313255 + 0.396871I$ $b = \quad 0.461659 + 0.256813I$	$-5.53623 - 2.54405I$	$2.47148 + 1.82962I$
$u = -0.00390 + 1.54662I$ $a = \quad 0.73015 + 2.45662I$ $b = \quad 1.10904 + 3.35675I$	$-5.53623 - 2.54405I$	$2.47148 + 1.82962I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.00390-1.54662I$ $a=-0.313255-0.396871I$ $b=\ \ 0.461659-0.256813I$	$-5.53623+2.54405I$	$2.47148-1.82962I$
$u=-0.00390-1.54662I$ $a=\ \ 0.73015-2.45662I$ $b=\ \ 1.10904-3.35675I$	$-5.53623+2.54405I$	$2.47148-1.82962I$
$u=\ \ 0.237639+0.357936I$ $a=-0.09055-1.49214I$ $b=\ \ 0.871743+1.056000I$	$0.95751-2.93464I$	$5.91453-1.99663I$
$u=\ \ 0.237639+0.357936I$ $a=-2.88646-0.04775I$ $b=-0.399928+0.571323I$	$0.95751-2.93464I$	$5.91453-1.99663I$
$u=\ \ 0.237639-0.357936I$ $a=-0.09055+1.49214I$ $b=\ \ 0.871743-1.056000I$	$0.95751+2.93464I$	$5.91453+1.99663I$
$u=\ \ 0.237639-0.357936I$ $a=-2.88646+0.04775I$ $b=-0.399928-0.571323I$	$0.95751+2.93464I$	$5.91453+1.99663I$
$u=\ \ 0.04934+1.59573I$ $a=-1.43137+0.03838I$ $b=-2.85551+0.16099I$	$-7.20594+5.75076I$	$-0.89404-7.30960I$
$u=\ \ 0.04934+1.59573I$ $a=-0.68115-2.96609I$ $b=-0.90158-3.44171I$	$-7.20594+5.75076I$	$-0.89404-7.30960I$
$u=\ \ 0.04934-1.59573I$ $a=-1.43137-0.03838I$ $b=-2.85551-0.16099I$	$-7.20594-5.75076I$	$-0.89404+7.30960I$
$u=\ \ 0.04934-1.59573I$ $a=-0.68115+2.96609I$ $b=-0.90158+3.44171I$	$-7.20594-5.75076I$	$-0.89404+7.30960I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.08513+1.66537I$ $a=\ 1.08196+1.76398I$ $b=\ 0.79877+2.26784I$	$-12.42410-5.72328I$	$-8.36068+4.92699I$
$u=-0.08513+1.66537I$ $a=\ 0.40246-2.24376I$ $b=\ 0.92121-3.30609I$	$-12.42410-5.72328I$	$-8.36068+4.92699I$
$u=-0.08513-1.66537I$ $a=\ 1.08196-1.76398I$ $b=\ 0.79877-2.26784I$	$-12.42410+5.72328I$	$-8.36068-4.92699I$
$u=-0.08513-1.66537I$ $a=\ 0.40246+2.24376I$ $b=\ 0.92121+3.30609I$	$-12.42410+5.72328I$	$-8.36068-4.92699I$
$u=-0.16558+1.66250I$ $a=-0.020599-1.400860I$ $b=\ 0.46750-2.07648I$	$-9.67769-7.32811I$	$-0.00586+9.90539I$
$u=-0.16558+1.66250I$ $a=\ 0.23390+2.13484I$ $b=\ 0.01183+2.90292I$	$-9.67769-7.32811I$	$-0.00586+9.90539I$
$u=-0.16558-1.66250I$ $a=-0.020599+1.400860I$ $b=\ 0.46750+2.07648I$	$-9.67769+7.32811I$	$-0.00586-9.90539I$
$u=-0.16558-1.66250I$ $a=\ 0.23390-2.13484I$ $b=\ 0.01183-2.90292I$	$-9.67769+7.32811I$	$-0.00586-9.90539I$

III.

$$\boldsymbol{I_3^u = \langle -u^8 - 3u^7 + \cdots + b - 1,\ u^{10} + 2u^9 + \cdots + a - 3,\ u^{11} + 2u^{10} + \cdots + 2u + 1\rangle}$$

(i) Arc colorings

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

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

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

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{10} - 2u^9 - 8u^8 - 11u^7 - 20u^6 - 18u^5 - 16u^4 - 7u^3 + u^2 + 2u + 3 \\ u^8 + 3u^7 + 8u^6 + 14u^5 + 18u^4 + 18u^3 + 12u^2 + 5u + 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^{10} - 2u^9 - 9u^8 - 13u^7 - 26u^6 - 26u^5 - 26u^4 - 15u^3 - 3u^2 + u + 3 \\ u^7 + 2u^6 + 6u^5 + 8u^4 + 10u^3 + 8u^2 + 4u + 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{10} - 2u^9 + \cdots - 14u - 1 \\ -u^8 - u^7 - 5u^6 - 4u^5 - 7u^4 - 4u^3 - 2u^2 - u + 1 \end{pmatrix}$$

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

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

$$a_2 = \begin{pmatrix} -u^{10} - 2u^9 - 8u^8 - 11u^7 - 20u^6 - 17u^5 - 15u^4 - 4u^3 + 3u^2 + 4u + 3 \\ u^8 + 2u^7 + 7u^6 + 10u^5 + 15u^4 + 14u^3 + 10u^2 + 5u + 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{10} + 2u^9 + 9u^8 + 14u^7 + 29u^6 + 34u^5 + 39u^4 + 31u^3 + 17u^2 + 6u - 1 \\ -u^4 - u^3 - 3u^2 - 2u - 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{10} + 2u^9 + 9u^8 + 14u^7 + 29u^6 + 34u^5 + 39u^4 + 31u^3 + 17u^2 + 6u - 1 \\ -u^4 - u^3 - 3u^2 - 2u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= -u^{10} + u^9 - 7u^8 - 3u^7 - 28u^6 - 37u^5 - 61u^4 - 66u^3 - 51u^2 - 24u - 6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{11} - 5y^{10} + \cdots + 4y - 1$
c_2, c_9	$y^{11} - 4y^{10} + \cdots + 5y - 1$
c_3, c_5	$y^{11} + 4y^{10} + \cdots - 3y - 1$
c_4	$y^{11} + y^{10} + \cdots + 3y - 1$
c_6, c_7, c_{10} c_{11}	$y^{11} + 14y^{10} + \cdots - 18y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.385850 + 0.932877I$ $a = -0.157522 - 0.148811I$ $b = 0.102818 - 1.019510I$	$-1.97960 - 4.20350I$	$-1.84188 + 8.05769I$
$u = -0.385850 - 0.932877I$ $a = -0.157522 + 0.148811I$ $b = 0.102818 + 1.019510I$	$-1.97960 + 4.20350I$	$-1.84188 - 8.05769I$
$u = -0.126428 + 1.175880I$ $a = 0.006705 - 0.532724I$ $b = 0.471057 - 0.785734I$	$-1.93683 - 3.97193I$	$3.41224 + 7.38669I$
$u = -0.126428 - 1.175880I$ $a = 0.006705 + 0.532724I$ $b = 0.471057 + 0.785734I$	$-1.93683 + 3.97193I$	$3.41224 - 7.38669I$
$u = -0.813298$ $a = 0.659674$ $b = -0.118101$	1.17683	-7.25190
$u = 0.01335 + 1.54786I$ $a = -0.79783 + 1.65779I$ $b = -1.64028 + 1.88855I$	$-6.19976 + 3.82276I$	$-1.00855 - 7.16549I$
$u = 0.01335 - 1.54786I$ $a = -0.79783 - 1.65779I$ $b = -1.64028 - 1.88855I$	$-6.19976 - 3.82276I$	$-1.00855 + 7.16549I$
$u = 0.015546 + 0.362124I$ $a = 2.69116 + 1.00089I$ $b = -0.296234 + 1.130380I$	$0.53546 + 3.67768I$	$-0.32060 - 6.20780I$
$u = 0.015546 - 0.362124I$ $a = 2.69116 - 1.00089I$ $b = -0.296234 - 1.130380I$	$0.53546 - 3.67768I$	$-0.32060 + 6.20780I$
$u = -0.10997 + 1.65171I$ $a = -0.07235 - 2.01756I$ $b = 0.42168 - 2.77387I$	$-10.74690 - 6.11277I$	$-2.11524 + 4.58856I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.10997 - 1.65171I$ $a = -0.07235 + 2.01756I$ $b = 0.42168 + 2.77387I$	$-10.74690 + 6.11277I$	$-2.11524 - 4.58856I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_8	$(u^{11}+u^{10}-2u^9-3u^8+2u^7+3u^6-2u^5-3u^4+u^3+2u^2-1)$ $\cdot(u^{31}-u^{30}+\cdots+u-1)(u^{38}-3u^{37}+\cdots+u+2)$
c_2, c_9	$(u^{11}-2u^9-u^8+3u^7+2u^6-3u^5-2u^4+3u^3+2u^2-u-1)$ $\cdot(u^{31}-u^{29}+\cdots-u-2)(u^{38}-u^{37}+\cdots-20u+1)$
c_3, c_5	$(u^{11}+4u^{10}+\cdots+5u+1)(u^{31}+4u^{30}+\cdots+18u-1)$ $\cdot(u^{38}-u^{37}+\cdots-35u-44)$
c_4	$(u^{11}-7u^{10}+\cdots+7u-1)(u^{19}-9u^{18}+\cdots-5u^2+1)^2$ $\cdot(u^{31}+18u^{30}+\cdots+9u+2)$
c_6, c_7	$(u^{11}+2u^{10}+\cdots+2u+1)(u^{19}-3u^{18}+\cdots+2u-1)^2$ $\cdot(u^{31}+5u^{30}+\cdots-29u-4)$
c_{10}, c_{11}	$(u^{11}-2u^{10}+\cdots+2u-1)(u^{19}-3u^{18}+\cdots+2u-1)^2$ $\cdot(u^{31}+5u^{30}+\cdots-29u-4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y^{11} - 5y^{10} + \cdots + 4y - 1)(y^{31} + 13y^{30} + \cdots - 33y - 1)$ $\cdot (y^{38} - 9y^{37} + \cdots + 59y + 4)$
c_2, c_9	$(y^{11} - 4y^{10} + \cdots + 5y - 1)(y^{31} - 2y^{30} + \cdots + 77y - 4)$ $\cdot (y^{38} - 5y^{37} + \cdots - 114y + 1)$
c_3, c_5	$(y^{11} + 4y^{10} + \cdots - 3y - 1)(y^{31} - 26y^{30} + \cdots + 92y - 1)$ $\cdot (y^{38} + 3y^{37} + \cdots - 35633y + 1936)$
c_4	$(y^{11} + y^{10} + \cdots + 3y - 1)(y^{19} - y^{18} + \cdots + 10y - 1)^2$ $\cdot (y^{31} + 36y^{29} + \cdots - 43y - 4)$
c_6, c_7, c_{10} c_{11}	$(y^{11} + 14y^{10} + \cdots - 18y - 1)(y^{19} + 23y^{18} + \cdots - 10y - 1)^2$ $\cdot (y^{31} + 37y^{30} + \cdots - 39y - 16)$