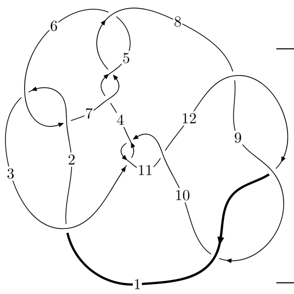
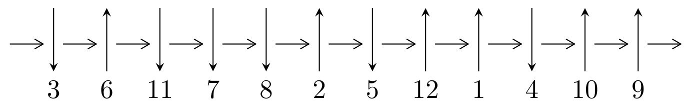
$12a_{0462}$ $(K12a_{0462})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$3{,}11 \xrightarrow[c_3]{} 4{,}6 \xrightarrow[c_2]{} 2 \xrightarrow[c_6]{} 7 \xrightarrow[c_4]{} 5 \xrightarrow[c_1]{} 1 \xrightarrow[c_{10}]{} 10 \xrightarrow[c_{11}]{} 12 \xrightarrow[c_9]{} 9 \xrightarrow[c_8]{} 8 \twoheadrightarrow c_5, c_7, c_{12}$

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

$$
\begin{aligned}
I^u_1 = \langle & 2.55777 \times 10^{154} u^{87} + 1.33040 \times 10^{154} u^{86} + \cdots + 1.37278 \times 10^{154} b - 6.08647 \times 10^{155}, \\
& 4.05262 \times 10^{155} u^{87} + 2.19316 \times 10^{156} u^{86} + \cdots + 3.02011 \times 10^{155} a + 5.78829 \times 10^{157}, \\
& u^{88} + 2u^{87} + \cdots + 128u + 32 \rangle \\
I^u_2 = \langle & b,\ u^4 + u^2 + a + u,\ u^5 - u^4 + 2u^3 - u^2 + u - 1 \rangle
\end{aligned}
$$

$$
I^v_1 = \langle a,\ -2v^4 + v^3 + 3v^2 + b - 6v + 2,\ v^5 - v^4 - v^3 + 4v^2 - 3v + 1 \rangle
$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 98 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. $I_1^u = \langle 2.56\times10^{154}u^{87} + 1.33\times10^{154}u^{86} + \cdots + 1.37\times10^{154}b - 6.09\times10^{155},\ 4.05\times10^{155}u^{87} + 2.19\times10^{156}u^{86} + \cdots + 3.02\times10^{155}a + 5.79\times10^{157},\ u^{88} + 2u^{87} + \cdots + 128u + 32\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-1.34188u^{87} - 7.26185u^{86} + \cdots - 648.536u - 191.658\\-1.86321u^{87} - 0.969132u^{86} + \cdots + 62.2360u + 44.3369\end{pmatrix}$$
$$a_2 = \begin{pmatrix}3.04936u^{87} + 5.94300u^{86} + \cdots + 329.238u + 75.2429\\-1.43574u^{87} - 2.17821u^{86} + \cdots - 23.2178u + 6.62152\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-4.53882u^{87} - 7.84119u^{86} + \cdots - 388.579u - 74.4637\\1.02928u^{87} - 2.25200u^{86} + \cdots - 369.905u - 130.560\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-0.0781229u^{87} + 1.92398u^{86} + \cdots + 185.114u + 62.4308\\-0.503789u^{87} - 3.88549u^{86} + \cdots - 424.089u - 133.649\end{pmatrix}$$
$$a_1 = \begin{pmatrix}1.61362u^{87} + 3.76479u^{86} + \cdots + 306.020u + 81.8645\\-1.43574u^{87} - 2.17821u^{86} + \cdots - 23.2178u + 6.62152\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u^3 + u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}u^3\\u^5 + u^3 + u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-1.55260u^{87} - 6.01547u^{86} + \cdots - 445.753u - 125.053\\1.59435u^{87} + 2.04652u^{86} + \cdots + 133.630u + 23.9040\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-3.04936u^{87} - 5.94300u^{86} + \cdots - 329.238u - 75.2429\\1.61315u^{87} + 1.25714u^{86} + \cdots + 54.4288u + 1.63829\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 3.28609u^{87} + 5.01107u^{86} + \cdots + 173.927u + 44.2883$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{88} + 36u^{87} + \cdots + 3584u + 1024$
c_2, c_6	$u^{88} - 2u^{87} + \cdots - 128u + 32$
c_3, c_{10}	$u^{88} + 2u^{87} + \cdots + 128u + 32$
c_4, c_5, c_7	$u^{88} - 7u^{87} + \cdots + 9u - 1$
c_8, c_9, c_{12}	$u^{88} + 7u^{87} + \cdots - 9u - 1$
c_{11}	$u^{88} - 36u^{87} + \cdots - 3584u + 1024$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{11}	$y^{88} + 24y^{87} + \cdots - 66715648y + 1048576$
c_2, c_3, c_6 c_{10}	$y^{88} + 36y^{87} + \cdots + 3584y + 1024$
c_4, c_5, c_7 c_8, c_9, c_{12}	$y^{88} - 77y^{87} + \cdots - 57y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.395995 + 0.919848I$ $a = 2.65099 - 0.04295I$ $b = -0.586527 - 0.945687I$	$2.26153 + 3.00983I$	0
$u = -0.395995 - 0.919848I$ $a = 2.65099 + 0.04295I$ $b = -0.586527 + 0.945687I$	$2.26153 - 3.00983I$	0
$u = -0.404116 + 0.907512I$ $a = -0.395066 - 0.612626I$ $b = 0.361388 - 1.098660I$	$2.25457 + 0.19023I$	0
$u = -0.404116 - 0.907512I$ $a = -0.395066 + 0.612626I$ $b = 0.361388 + 1.098660I$	$2.25457 - 0.19023I$	0
$u = -0.886787 + 0.438676I$ $a = 0.282546 + 1.241530I$ $b = -0.415238 + 0.812588I$	$0.69474 - 1.25403I$	0
$u = -0.886787 - 0.438676I$ $a = 0.282546 - 1.241530I$ $b = -0.415238 - 0.812588I$	$0.69474 + 1.25403I$	0
$u = 0.812254 + 0.547196I$ $a = 0.436136 - 0.137542I$ $b = -0.616284 - 1.184160I$	$-6.80158 + 6.33791I$	0
$u = 0.812254 - 0.547196I$ $a = 0.436136 + 0.137542I$ $b = -0.616284 + 1.184160I$	$-6.80158 - 6.33791I$	0
$u = 0.474341 + 0.926493I$ $a = 1.015950 + 0.235751I$ $b = -1.123980 + 0.220654I$	$-0.22584 - 2.46461I$	0
$u = 0.474341 - 0.926493I$ $a = 1.015950 - 0.235751I$ $b = -1.123980 - 0.220654I$	$-0.22584 + 2.46461I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.625512 + 0.717766I$ $a = -0.175517 - 1.114280I$ $b = -0.159287 - 0.924776I$	$-2.96877 - 1.76029I$	0
$u = 0.625512 - 0.717766I$ $a = -0.175517 + 1.114280I$ $b = -0.159287 + 0.924776I$	$-2.96877 + 1.76029I$	0
$u = 0.995359 + 0.339245I$ $a = -0.580860 - 0.374909I$ $b = 0.678568 - 0.640826I$	$4.14234 + 0.58263I$	0
$u = 0.995359 - 0.339245I$ $a = -0.580860 + 0.374909I$ $b = 0.678568 + 0.640826I$	$4.14234 - 0.58263I$	0
$u = 0.159287 + 0.924776I$ $a = 1.36498 + 1.59127I$ $b = -0.625512 - 0.717766I$	$2.96877 + 1.76029I$	0
$u = 0.159287 - 0.924776I$ $a = 1.36498 - 1.59127I$ $b = -0.625512 + 0.717766I$	$2.96877 - 1.76029I$	0
$u = -0.678568 + 0.640826I$ $a = 1.063540 - 0.436699I$ $b = -0.995359 - 0.339245I$	$-4.14234 - 0.58263I$	0
$u = -0.678568 - 0.640826I$ $a = 1.063540 + 0.436699I$ $b = -0.995359 + 0.339245I$	$-4.14234 + 0.58263I$	0
$u = 0.073976 + 1.077970I$ $a = -1.08508 - 1.73052I$ $b = 0.521667 + 0.977886I$	$-1.30307 + 4.99629I$	0
$u = 0.073976 - 1.077970I$ $a = -1.08508 + 1.73052I$ $b = 0.521667 - 0.977886I$	$-1.30307 - 4.99629I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.958984 + 0.503942I$ $a = 0.926029 + 0.597774I$ $b = -0.958984 + 0.503942I$	$3.72374I$	0
$u = 0.958984 - 0.503942I$ $a = 0.926029 - 0.597774I$ $b = -0.958984 - 0.503942I$	$-3.72374I$	0
$u = 0.415238 + 0.812588I$ $a = -1.44367 - 1.70184I$ $b = 0.886787 + 0.438676I$	$-0.69474 - 1.25403I$	0
$u = 0.415238 - 0.812588I$ $a = -1.44367 + 1.70184I$ $b = 0.886787 - 0.438676I$	$-0.69474 + 1.25403I$	0
$u = 0.702985 + 0.565831I$ $a = -0.460163 + 0.540285I$ $b = 0.495675 + 0.994508I$	$-1.40784 + 2.54267I$	$-3.45686 - 3.29238I$
$u = 0.702985 - 0.565831I$ $a = -0.460163 - 0.540285I$ $b = 0.495675 - 0.994508I$	$-1.40784 - 2.54267I$	$-3.45686 + 3.29238I$
$u = -0.521667 + 0.977886I$ $a = -0.200965 + 0.894250I$ $b = -0.073976 + 1.077970I$	$1.30307 + 4.99629I$	0
$u = -0.521667 - 0.977886I$ $a = -0.200965 - 0.894250I$ $b = -0.073976 - 1.077970I$	$1.30307 - 4.99629I$	0
$u = -0.495675 + 0.994508I$ $a = 0.546599 - 1.120560I$ $b = -0.702985 + 0.565831I$	$1.40784 + 2.54267I$	0
$u = -0.495675 - 0.994508I$ $a = 0.546599 + 1.120560I$ $b = -0.702985 - 0.565831I$	$1.40784 - 2.54267I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.798601 + 0.772998I$ $a = 1.096920 - 0.166790I$ $b = 0.033875 - 1.258740I$	$-6.87603 - 1.37349I$	0
$u = -0.798601 - 0.772998I$ $a = 1.096920 + 0.166790I$ $b = 0.033875 + 1.258740I$	$-6.87603 + 1.37349I$	0
$u = 0.586527 + 0.945687I$ $a = -1.79270 - 1.01470I$ $b = 0.395995 - 0.919848I$	$-2.26153 - 3.00983I$	0
$u = 0.586527 - 0.945687I$ $a = -1.79270 + 1.01470I$ $b = 0.395995 + 0.919848I$	$-2.26153 + 3.00983I$	0
$u = -0.471722 + 1.010740I$ $a = -2.48364 - 0.23893I$ $b = 0.651889 + 1.129260I$	$-2.77315 + 6.92377I$	0
$u = -0.471722 - 1.010740I$ $a = -2.48364 + 0.23893I$ $b = 0.651889 - 1.129260I$	$-2.77315 - 6.92377I$	0
$u = -1.021560 + 0.502568I$ $a = -0.452502 - 0.480269I$ $b = 0.617119 - 0.992602I$	$3.07312 - 5.61606I$	0
$u = -1.021560 - 0.502568I$ $a = -0.452502 + 0.480269I$ $b = 0.617119 + 0.992602I$	$3.07312 + 5.61606I$	0
$u = 1.123980 + 0.220654I$ $a = 0.425729 + 0.019981I$ $b = -0.474341 + 0.926493I$	$0.22584 - 2.46461I$	0
$u = 1.123980 - 0.220654I$ $a = 0.425729 - 0.019981I$ $b = -0.474341 - 0.926493I$	$0.22584 + 2.46461I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.769853 + 0.852318I$ $a = 0.864593 + 0.257379I$ $b = -0.066555 + 1.321620I$	$-10.45800 - 2.88090I$	0
$u = 0.769853 - 0.852318I$ $a = 0.864593 - 0.257379I$ $b = -0.066555 - 1.321620I$	$-10.45800 + 2.88090I$	0
$u = -0.361388 + 1.098660I$ $a = -0.11965 + 1.46530I$ $b = 0.404116 - 0.907512I$	$-2.25457 - 0.19023I$	0
$u = -0.361388 - 1.098660I$ $a = -0.11965 - 1.46530I$ $b = 0.404116 + 0.907512I$	$-2.25457 + 0.19023I$	0
$u = -0.358618 + 0.763180I$ $a = 0.471283 + 0.174177I$ $b = -0.537085 + 1.290420I$	$-3.83566 - 3.43814I$	$0.61318 - 1.44912I$
$u = -0.358618 - 0.763180I$ $a = 0.471283 - 0.174177I$ $b = -0.537085 - 1.290420I$	$-3.83566 + 3.43814I$	$0.61318 + 1.44912I$
$u = -0.684043 + 0.947304I$ $a = 0.721420 - 0.287781I$ $b = -0.157119 - 1.376880I$	$-6.29574 + 6.95849I$	0
$u = -0.684043 - 0.947304I$ $a = 0.721420 + 0.287781I$ $b = -0.157119 + 1.376880I$	$-6.29574 - 6.95849I$	0
$u = -0.617119 + 0.992602I$ $a = -0.89496 + 1.13273I$ $b = 1.021560 - 0.502568I$	$-3.07312 + 5.61606I$	0
$u = -0.617119 - 0.992602I$ $a = -0.89496 - 1.13273I$ $b = 1.021560 + 0.502568I$	$-3.07312 - 5.61606I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.443550 + 1.114320I$ $a = -0.636408 - 0.138775I$ $b = 0.637561 - 0.134384I$	$5.24580 - 3.85196I$	0
$u = 0.443550 - 1.114320I$ $a = -0.636408 + 0.138775I$ $b = 0.637561 + 0.134384I$	$5.24580 + 3.85196I$	0
$u = 0.613830 + 1.034560I$ $a = 2.09577 + 0.54409I$ $b = -0.613830 + 1.034560I$	$-7.63074I$	0
$u = 0.613830 - 1.034560I$ $a = 2.09577 - 0.54409I$ $b = -0.613830 - 1.034560I$	$7.63074I$	0
$u = -0.365401 + 0.697232I$ $a = -0.790767 + 0.184744I$ $b = 0.430621 + 0.240473I$	$0.192499 + 1.200880I$	$3.44276 - 4.83413I$
$u = -0.365401 - 0.697232I$ $a = -0.790767 - 0.184744I$ $b = 0.430621 - 0.240473I$	$0.192499 - 1.200880I$	$3.44276 + 4.83413I$
$u = -1.078720 + 0.561603I$ $a = 0.410171 + 0.130932I$ $b = -0.687566 + 1.140520I$	$-1.99246 - 9.73563I$	0
$u = -1.078720 - 0.561603I$ $a = 0.410171 - 0.130932I$ $b = -0.687566 - 1.140520I$	$-1.99246 + 9.73563I$	0
$u = -0.033875 + 1.258740I$ $a = -1.59344 + 0.20088I$ $b = 0.798601 - 0.772998I$	$6.87603 + 1.37349I$	0
$u = -0.033875 - 1.258740I$ $a = -1.59344 - 0.20088I$ $b = 0.798601 + 0.772998I$	$6.87603 - 1.37349I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.655409 + 1.077200I$ $a = -2.11903 - 0.25132I$ $b = 0.703968 - 1.167180I$	$-5.18587 - 11.86060I$	0
$u = 0.655409 - 1.077200I$ $a = -2.11903 + 0.25132I$ $b = 0.703968 + 1.167180I$	$-5.18587 + 11.86060I$	0
$u = -0.119816 + 0.724230I$ $a = -3.31363 + 0.21378I$ $b = 0.496811 + 0.533389I$	$-0.110831 - 0.799402I$	$3.78510 - 2.23405I$
$u = -0.119816 - 0.724230I$ $a = -3.31363 - 0.21378I$ $b = 0.496811 - 0.533389I$	$-0.110831 + 0.799402I$	$3.78510 + 2.23405I$
$u = -0.496811 + 0.533389I$ $a = -2.32822 + 1.78680I$ $b = 0.119816 + 0.724230I$	$0.110831 - 0.799402I$	$-3.78510 - 2.23405I$
$u = -0.496811 - 0.533389I$ $a = -2.32822 - 1.78680I$ $b = 0.119816 - 0.724230I$	$0.110831 + 0.799402I$	$-3.78510 + 2.23405I$
$u = -0.651889 + 1.129260I$ $a = -1.52240 + 0.84713I$ $b = 0.471722 + 1.010740I$	$2.77315 + 6.92377I$	0
$u = -0.651889 - 1.129260I$ $a = -1.52240 - 0.84713I$ $b = 0.471722 - 1.010740I$	$2.77315 - 6.92377I$	0
$u = 0.066555 + 1.321620I$ $a = 1.45861 - 0.47999I$ $b = -0.769853 + 0.852318I$	$10.45800 - 2.88090I$	0
$u = 0.066555 - 1.321620I$ $a = 1.45861 + 0.47999I$ $b = -0.769853 - 0.852318I$	$10.45800 + 2.88090I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.687566 + 1.140520I$ $a = -0.821367 - 0.858877I$ $b = 1.078720 + 0.561603I$	$1.99246 - 9.73563I$	0
$u = 0.687566 - 1.140520I$ $a = -0.821367 + 0.858877I$ $b = 1.078720 - 0.561603I$	$1.99246 + 9.73563I$	0
$u = 0.616284 + 1.184160I$ $a = 0.579368 + 0.788710I$ $b = -0.812254 - 0.547196I$	$6.80158 - 6.33791I$	0
$u = 0.616284 - 1.184160I$ $a = 0.579368 - 0.788710I$ $b = -0.812254 + 0.547196I$	$6.80158 + 6.33791I$	0
$u = -0.637561 + 0.134384I$ $a = 0.495827 - 0.083510I$ $b = -0.443550 - 1.114320I$	$-5.24580 + 3.85196I$	$-8.95635 - 3.01207I$
$u = -0.637561 - 0.134384I$ $a = 0.495827 + 0.083510I$ $b = -0.443550 + 1.114320I$	$-5.24580 - 3.85196I$	$-8.95635 + 3.01207I$
$u = 0.645090$ $a = -0.735762$ $b = -0.330483$	2.22439	4.34230
$u = -0.703968 + 1.167180I$ $a = 1.76924 - 0.55256I$ $b = -0.655409 - 1.077200I$	$5.18587 + 11.86060I$	0
$u = -0.703968 - 1.167180I$ $a = 1.76924 + 0.55256I$ $b = -0.655409 + 1.077200I$	$5.18587 - 11.86060I$	0
$u = 0.157119 + 1.376880I$ $a = -1.29707 + 0.71694I$ $b = 0.684043 - 0.947304I$	$6.29574 - 6.95849I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.157119 - 1.376880I$ $a = -1.29707 - 0.71694I$ $b = 0.684043 + 0.947304I$	$6.29574 + 6.95849I$	0
$u = -0.748964 + 1.177590I$ $a = -1.81834 + 0.32952I$ $b = 0.748964 + 1.177590I$	$16.3231I$	0
$u = -0.748964 - 1.177590I$ $a = -1.81834 - 0.32952I$ $b = 0.748964 - 1.177590I$	$-16.3231I$	0
$u = 0.537085 + 1.290420I$ $a = -0.079296 - 0.880909I$ $b = 0.358618 + 0.763180I$	$3.83566 - 3.43814I$	0
$u = 0.537085 - 1.290420I$ $a = -0.079296 + 0.880909I$ $b = 0.358618 - 0.763180I$	$3.83566 + 3.43814I$	0
$u = -0.430621 + 0.240473I$ $a = -0.693685 + 0.556563I$ $b = 0.365401 + 0.697232I$	$-0.192499 + 1.200880I$	$-3.44276 - 4.83413I$
$u = -0.430621 - 0.240473I$ $a = -0.693685 - 0.556563I$ $b = 0.365401 - 0.697232I$	$-0.192499 - 1.200880I$	$-3.44276 + 4.83413I$
$u = 0.330483$ $a = 2.08127$ $b = -0.645090$	-2.22439	-4.34230

II. $I_2^u = \langle b,\ u^4 + u^2 + a + u,\ u^5 - u^4 + 2u^3 - u^2 + u - 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^4 - u^2 - u \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^4 - u^2 - u \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^4 - u^2 - u + 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^3 \\ u^4 - u^3 + u^2 + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1 \\ -u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.339110 + 0.822375I$ $a = 0.896438 - 0.890762I$ $b = 0$	$-1.31583 + 1.53058I$	$-1.49901 - 3.45976I$
$u = -0.339110 - 0.822375I$ $a = 0.896438 + 0.890762I$ $b = 0$	$-1.31583 - 1.53058I$	$-1.49901 + 3.45976I$
$u = 0.766826$ $a = -1.70062$ $b = 0$	0.756147	-3.75670
$u = 0.455697 + 1.200150I$ $a = 0.453870 + 0.402731I$ $b = 0$	$4.22763 - 4.40083I$	$2.37737 + 5.82971I$
$u = 0.455697 - 1.200150I$ $a = 0.453870 - 0.402731I$ $b = 0$	$4.22763 + 4.40083I$	$2.37737 - 5.82971I$

III. $\boldsymbol{I_1^v = \langle a,\ -2v^4 + v^3 + 3v^2 + b - 6v + 2,\ v^5 - v^4 - v^3 + 4v^2 - 3v + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ 2v^4 - v^3 - 3v^2 + 6v - 2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ v^4 - v^3 - v^2 + 4v - 3 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 2v^4 - v^3 - 3v^2 + 6v - 2 \\ -v^3 + v - 2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -2v^4 + v^3 + 3v^2 - 7v + 3 \\ v^3 - 2v + 3 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} v^4 - v^3 - v^2 + 4v - 2 \\ v^4 - v^3 - v^2 + 4v - 3 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -v^4 + v^3 + v^2 - 3v + 2 \\ -v^4 + v^3 + v^2 - 4v + 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -v^4 + v^3 + v^2 - 4v + 2 \\ -v^4 + v^3 + v^2 - 4v + 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -7v^4 + 2v^3 + 9v^2 - 23v + 7$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 0.896438 + 0.890762I$ $a = 0$ $b = -0.339110 - 0.822375I$	$1.31583 + 1.53058I$	$1.49901 - 3.45976I$
$v = 0.896438 - 0.890762I$ $a = 0$ $b = -0.339110 + 0.822375I$	$1.31583 - 1.53058I$	$1.49901 + 3.45976I$
$v = 0.453870 + 0.402731I$ $a = 0$ $b = 0.455697 + 1.200150I$	$-4.22763 + 4.40083I$	$-2.37737 - 5.82971I$
$v = 0.453870 - 0.402731I$ $a = 0$ $b = 0.455697 - 1.200150I$	$-4.22763 - 4.40083I$	$-2.37737 + 5.82971I$
$v = -1.70062$ $a = 0$ $b = 0.766826$	-0.756147	3.75670

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^5(u^5-3u^4+\cdots-u+1)(u^{88}+36u^{87}+\cdots+3584u+1024)$
c_2	$u^5(u^5-u^4+\cdots+u-1)(u^{88}-2u^{87}+\cdots-128u+32)$
c_3	$u^5(u^5-u^4+\cdots+u-1)(u^{88}+2u^{87}+\cdots+128u+32)$
c_4, c_5	$((u-1)^5)(u^5+u^4+\cdots+u-1)(u^{88}-7u^{87}+\cdots+9u-1)$
c_6	$u^5(u^5+u^4+\cdots+u+1)(u^{88}-2u^{87}+\cdots-128u+32)$
c_7	$((u+1)^5)(u^5-u^4+\cdots+u+1)(u^{88}-7u^{87}+\cdots+9u-1)$
c_8, c_9	$((u+1)^5)(u^5-u^4+\cdots+u+1)(u^{88}+7u^{87}+\cdots-9u-1)$
c_{10}	$u^5(u^5+u^4+\cdots+u+1)(u^{88}+2u^{87}+\cdots+128u+32)$
c_{11}	$u^5(u^5-3u^4+\cdots-u+1)(u^{88}-36u^{87}+\cdots-3584u+1024)$
c_{12}	$((u-1)^5)(u^5+u^4+\cdots+u-1)(u^{88}+7u^{87}+\cdots-9u-1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{11}	$y^5(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)$ $\cdot (y^{88} + 24y^{87} + \cdots - 66715648y + 1048576)$
c_2, c_3, c_6 c_{10}	$y^5(y^5 + 3y^4 + \cdots - y - 1)(y^{88} + 36y^{87} + \cdots + 3584y + 1024)$
c_4, c_5, c_7 c_8, c_9, c_{12}	$((y-1)^5)(y^5 - 5y^4 + \cdots - y - 1)(y^{88} - 77y^{87} + \cdots - 57y + 1)$