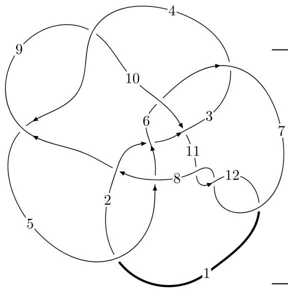
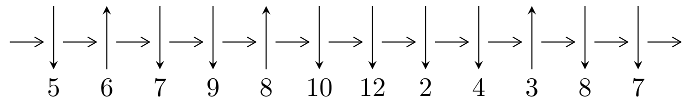
$12n_{0886}$ ($K12n_{0886}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$
\begin{aligned}
I_1^u = \langle & 2.28947 \times 10^{47} u^{38} + 4.04764 \times 10^{47} u^{37} + \cdots + 2.48782 \times 10^{48} b - 5.46868 \times 10^{48}, \\
& 4.40280 \times 10^{48} u^{38} + 1.28334 \times 10^{49} u^{37} + \cdots + 3.48294 \times 10^{49} a + 1.28461 \times 10^{49},\ u^{39} + 3u^{38} + \cdots + 97u +
\end{aligned}
$$

$$
\begin{aligned}
I_2^u = \langle & -3.16826 \times 10^{23} a u^{35} + 4.21892 \times 10^{23} u^{35} + \cdots + 6.95896 \times 10^{24} a + 5.71717 \times 10^{24}, \\
& 5.19604 \times 10^{24} a u^{35} - 8.48983 \times 10^{24} u^{35} + \cdots + 6.84613 \times 10^{24} a + 1.19689 \times 10^{26}, \\
& u^{36} - 2u^{35} + \cdots - 48u + 19 \rangle
\end{aligned}
$$

$$
\begin{aligned}
I_3^u = \langle & -22u^{12} a + 31u^{12} + \cdots + 12a + 9,\ 6u^{12} a + 4u^{12} + \cdots - 6a + 38, \\
& u^{13} - 2u^{12} + 8u^{11} - 12u^{10} + 25u^9 - 27u^8 + 40u^7 - 31u^6 + 36u^5 - 18u^4 + 17u^3 - 2u^2 + 3u + 1 \rangle
\end{aligned}
$$

$$
I_4^u = \langle -u^5 - 2u^4 - 3u^3 - 3u^2 + b - 2u,\ -u^4 - 2u^3 - 4u^2 + a - 3u - 3,\ u^6 + 2u^5 + 4u^4 + 4u^3 + 4u^2 + u + 1 \rangle
$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 143 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. $I^u_1 =$
$\langle 2.29\times10^{47}u^{38}+4.05\times10^{47}u^{37}+\cdots+2.49\times10^{48}b-5.47\times10^{48},\ 4.40\times10^{48}u^{38}+1.28\times10^{49}u^{37}+\cdots+3.48\times10^{49}a+1.28\times10^{49},\ u^{39}+3u^{38}+\cdots+97u+28\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-0.126410u^{38}-0.368465u^{37}+\cdots-11.5215u-0.368828\\-0.0920273u^{38}-0.162698u^{37}+\cdots+2.33867u+2.19819\end{pmatrix}$$
$$a_7 = \begin{pmatrix}u\\u^3+u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-0.126011u^{38}-0.302424u^{37}+\cdots-3.73851u+1.95256\\-0.104356u^{38}-0.190877u^{37}+\cdots+3.82088u+2.70401\end{pmatrix}$$
$$a_1 = \begin{pmatrix}u^2+1\\u^4+2u^2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.194866u^{38}-0.476802u^{37}+\cdots-9.00949u-1.31112\\0.0407147u^{38}-0.0606632u^{37}+\cdots-11.8899u-6.06492\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-0.0785067u^{38}-0.327547u^{37}+\cdots-14.6147u-5.27648\\0.0107661u^{38}+0.0759285u^{37}+\cdots+11.8930u+3.53949\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-0.113492u^{38}-0.284012u^{37}+\cdots-2.11951u+1.73553\\0.195599u^{38}+0.486101u^{37}+\cdots+11.1853u+0.740865\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-0.0785067u^{38}-0.327547u^{37}+\cdots-14.6147u-5.27648\\0.124150u^{38}+0.411280u^{37}+\cdots+23.0178u+6.11626\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.0241106u^{38}+0.0681245u^{37}+\cdots+15.3829u+6.23920\\0.225516u^{38}+0.613536u^{37}+\cdots+12.0478u+0.558854\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.711169u^{38}-3.04251u^{37}+\cdots-97.9978u-38.0725$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^{39} - u^{38} + \cdots - 288u + 24$
c_2	$u^{39} - 6u^{38} + \cdots + 577u + 284$
c_4, c_9	$3(3u^{39} - 9u^{38} + \cdots + 384u + 128)$
c_5, c_{10}	$3(3u^{39} - 15u^{38} + \cdots + 24u + 17)$
c_6, c_8	$u^{39} + 4u^{37} + \cdots - 21u + 3$
c_7, c_{11}, c_{12}	$u^{39} + 3u^{38} + \cdots + 97u + 28$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^{39} - 13y^{38} + \cdots + 9024y - 576$
c_2	$y^{39} + 10y^{38} + \cdots + 1402473y - 80656$
c_4, c_9	$9(9y^{39} + 165y^{38} + \cdots + 188416y - 16384)$
c_5, c_{10}	$9(9y^{39} + 147y^{38} + \cdots - 7176y - 289)$
c_6, c_8	$y^{39} + 8y^{38} + \cdots + 69y - 9$
c_7, c_{11}, c_{12}	$y^{39} + 19y^{38} + \cdots + 3249y - 784$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.916514 + 0.441237I$ $a = 0.247881 - 0.833626I$ $b = 0.207591 - 1.107760I$	$-2.80770 + 1.03926I$	$-7.88545 - 0.44169I$
$u = -0.916514 - 0.441237I$ $a = 0.247881 + 0.833626I$ $b = 0.207591 + 1.107760I$	$-2.80770 - 1.03926I$	$-7.88545 + 0.44169I$
$u = -0.135804 + 0.949926I$ $a = -0.160880 - 1.247510I$ $b = 0.883058 + 0.239291I$	$4.06880 + 6.12048I$	$0.19446 - 7.21984I$
$u = -0.135804 - 0.949926I$ $a = -0.160880 + 1.247510I$ $b = 0.883058 - 0.239291I$	$4.06880 - 6.12048I$	$0.19446 + 7.21984I$
$u = -0.328914 + 0.888085I$ $a = -0.161668 - 1.131530I$ $b = -1.237060 - 0.045140I$	$1.48517 + 2.10751I$	$-1.96614 - 8.73804I$
$u = -0.328914 - 0.888085I$ $a = -0.161668 + 1.131530I$ $b = -1.237060 + 0.045140I$	$1.48517 - 2.10751I$	$-1.96614 + 8.73804I$
$u = -0.483608 + 0.797162I$ $a = 0.47424 - 2.55899I$ $b = -1.82147 - 1.40610I$	$1.57165 + 2.07582I$	$13.4964 + 12.8859I$
$u = -0.483608 - 0.797162I$ $a = 0.47424 + 2.55899I$ $b = -1.82147 + 1.40610I$	$1.57165 - 2.07582I$	$13.4964 - 12.8859I$
$u = 0.923741 + 0.613959I$ $a = -0.890068 - 0.882613I$ $b = -0.80569 - 1.43771I$	$-3.92945 + 6.07851I$	$-7.89096 - 4.82336I$
$u = 0.923741 - 0.613959I$ $a = -0.890068 + 0.882613I$ $b = -0.80569 + 1.43771I$	$-3.92945 - 6.07851I$	$-7.89096 + 4.82336I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.752187+0.832147I$ $a=\ \ 1.13539-0.96953I$ $b=-0.190145-0.615515I$	$-0.10015-2.41578I$	$-8.63287+3.83598I$
$u=-0.752187-0.832147I$ $a=\ \ 1.13539+0.96953I$ $b=-0.190145+0.615515I$	$-0.10015+2.41578I$	$-8.63287-3.83598I$
$u=-0.711955+0.900911I$ $a=-0.089276-1.410670I$ $b=-0.089221-0.908822I$	$0.11878+7.97565I$	$-8.57990-9.49272I$
$u=-0.711955-0.900911I$ $a=-0.089276+1.410670I$ $b=-0.089221+0.908822I$	$0.11878-7.97565I$	$-8.57990+9.49272I$
$u=\ \ 0.800506+0.823754I$ $a=\ \ 0.212411+1.237080I$ $b=-0.125997+1.041490I$	$-4.29233-4.38952I$	$-12.7464+8.5386I$
$u=\ \ 0.800506-0.823754I$ $a=\ \ 0.212411-1.237080I$ $b=-0.125997-1.041490I$	$-4.29233+4.38952I$	$-12.7464-8.5386I$
$u=\ \ 0.713165+0.944690I$ $a=\ \ 0.925475+0.938504I$ $b=-0.208623+0.798757I$	$-3.87382-1.34228I$	$-11.55865-0.85858I$
$u=\ \ 0.713165-0.944690I$ $a=\ \ 0.925475-0.938504I$ $b=-0.208623-0.798757I$	$-3.87382+1.34228I$	$-11.55865+0.85858I$
$u=-0.177652+0.777872I$ $a=\ \ 1.70436+0.68558I$ $b=-0.822667+0.609797I$	$3.36049-4.70428I$	$0.07633+7.03063I$
$u=-0.177652-0.777872I$ $a=\ \ 1.70436-0.68558I$ $b=-0.822667-0.609797I$	$3.36049+4.70428I$	$0.07633-7.03063I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.146750 + 0.440730I$ $a = -0.565258 + 0.986647I$ $b = -0.89775 + 1.37606I$	$0.05936 - 12.21210I$	$-4.60084 + 6.75366I$
$u = -1.146750 - 0.440730I$ $a = -0.565258 - 0.986647I$ $b = -0.89775 - 1.37606I$	$0.05936 + 12.21210I$	$-4.60084 - 6.75366I$
$u = 0.735638 + 1.075410I$ $a = -0.76266 - 1.50039I$ $b = 1.16251 - 1.43644I$	$-2.50894 - 12.16870I$	$-6.00000 + 9.67889I$
$u = 0.735638 - 1.075410I$ $a = -0.76266 + 1.50039I$ $b = 1.16251 + 1.43644I$	$-2.50894 + 12.16870I$	$-6.00000 - 9.67889I$
$u = -0.617583 + 1.166490I$ $a = 0.802084 - 0.731744I$ $b = -0.520402 - 0.991081I$	$-0.54733 + 4.60938I$	$-6.00000 - 4.32150I$
$u = -0.617583 - 1.166490I$ $a = 0.802084 + 0.731744I$ $b = -0.520402 + 0.991081I$	$-0.54733 - 4.60938I$	$-6.00000 + 4.32150I$
$u = 0.177150 + 1.362390I$ $a = -0.738434 + 0.517093I$ $b = 0.110360 - 0.283380I$	$8.80818 - 3.56269I$	0
$u = 0.177150 - 1.362390I$ $a = -0.738434 - 0.517093I$ $b = 0.110360 + 0.283380I$	$8.80818 + 3.56269I$	0
$u = -0.09539 + 1.41424I$ $a = -0.264813 - 0.436944I$ $b = 0.341868 + 0.804996I$	$3.95195 + 4.10222I$	$-13.18136 + 0.I$
$u = -0.09539 - 1.41424I$ $a = -0.264813 + 0.436944I$ $b = 0.341868 - 0.804996I$	$3.95195 - 4.10222I$	$-13.18136 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.74692 + 1.23578I$ $a = -0.84084 + 1.29226I$ $b = 1.11567 + 1.33283I$	$2.5485 + 18.9404I$	0
$u = -0.74692 - 1.23578I$ $a = -0.84084 - 1.29226I$ $b = 1.11567 - 1.33283I$	$2.5485 - 18.9404I$	0
$u = 1.11970 + 0.93154I$ $a = 0.408674 + 0.839692I$ $b = -0.125452 + 1.366430I$	$-3.17217 - 3.88150I$	0
$u = 1.11970 - 0.93154I$ $a = 0.408674 - 0.839692I$ $b = -0.125452 - 1.366430I$	$-3.17217 + 3.88150I$	0
$u = 0.442258 + 0.222040I$ $a = 1.168930 - 0.401308I$ $b = -0.226973 + 0.541420I$	$3.75967 - 1.17014I$	$-3.19480 + 5.79771I$
$u = 0.442258 - 0.222040I$ $a = 1.168930 + 0.401308I$ $b = -0.226973 - 0.541420I$	$3.75967 + 1.17014I$	$-3.19480 - 5.79771I$
$u = -0.13386 + 1.60465I$ $a = -0.048505 + 0.218993I$ $b = 0.580718 - 1.138840I$	$7.49768 - 7.41295I$	0
$u = -0.13386 - 1.60465I$ $a = -0.048505 - 0.218993I$ $b = 0.580718 + 1.138840I$	$7.49768 + 7.41295I$	0
$u = -0.330056$ $a = 1.27880$ $b = 0.339349$	-0.743035	-13.5950

II. $I_2^u = \langle -3.17 \times 10^{23} a u^{35} + 4.22 \times 10^{23} u^{35} + \cdots + 6.96 \times 10^{24} a + 5.72 \times 10^{24},\ 5.20 \times 10^{24} a u^{35} - 8.49 \times 10^{24} u^{35} + \cdots + 6.85 \times 10^{24} a + 1.20 \times 10^{26},\ u^{36} - 2u^{35} + \cdots - 48u + 19 \rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} a \\ 2.06053 a u^{35} - 2.74385 u^{35} + \cdots - 45.2588 a - 37.1826 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 1.48264 a u^{35} - 1.81640 u^{35} + \cdots - 25.3448 a - 27.0290 \\ 2.57849 a u^{35} - 3.07539 u^{35} + \cdots - 56.3149 a - 44.1527 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 1.06765 a u^{35} - 0.157828 u^{35} + \cdots - 25.9276 a + 24.1903 \\ -1.00977 a u^{35} + 2.51580 u^{35} + \cdots + 30.5478 a - 48.9528 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -2.38204 a u^{35} + 1.36461 u^{35} + \cdots - 49.5905 a + 25.0494 \\ 0.374254 u^{35} + 0.716994 u^{34} + \cdots - 189.282 u + 72.9225 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.913044 a u^{35} + 2.61003 u^{35} + \cdots + 28.4338 a - 73.4659 \\ -1.71093 a u^{35} + 2.45734 u^{35} + \cdots - 0.462668 a - 176.281 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2.38204 a u^{35} + 1.36461 u^{35} + \cdots - 49.5905 a + 25.0494 \\ 1.38657 a u^{35} - 1.10162 u^{35} + \cdots + 39.1501 a + 52.6371 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.995475 a u^{35} - 0.534403 u^{35} + \cdots - 10.4404 a + 39.4763 \\ 0.860915 a u^{35} + 2.29603 u^{35} + \cdots - 34.0245 a - 24.9123 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{931441488043900001398740}{375022558264085034184 1} u^{35} + \frac{927574178728560114792 63}{3750225582640850341841} u^{34} + \cdots + \frac{3062243866116418648517160}{3750225582640850341841} u - \frac{2323290663795802739504375}{3750225582640850341841}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^{72} + u^{71} + \cdots + 2338u + 157$
c_2	$(u^{36} + 3u^{35} + \cdots - 4u + 1)^2$
c_4, c_9	$(u^{36} - u^{35} + \cdots - 414u + 81)^2$
c_5, c_{10}	$u^{72} - 10u^{70} + \cdots - 504u + 281$
c_6, c_8	$u^{72} + u^{71} + \cdots + 112u + 263$
c_7, c_{11}, c_{12}	$(u^{36} - 2u^{35} + \cdots - 48u + 19)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^{72} + 31y^{71} + \cdots - 3034000y + 24649$
c_2	$(y^{36} - 5y^{35} + \cdots - 12y + 1)^2$
c_4, c_9	$(y^{36} + 25y^{35} + \cdots + 64638y + 6561)^2$
c_5, c_{10}	$y^{72} - 20y^{71} + \cdots + 2867332y + 78961$
c_6, c_8	$y^{72} + 35y^{71} + \cdots + 2571694y + 69169$
c_7, c_{11}, c_{12}	$(y^{36} + 18y^{35} + \cdots + 5182y + 361)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.964482 + 0.279763I$ $a = -0.083033 - 0.734831I$ $b = -0.294363 - 1.055310I$	$-2.40362 + 4.79530I$	$-7.96169 - 4.74931I$
$u = 0.964482 + 0.279763I$ $a = 0.444907 + 1.284300I$ $b = 0.885771 + 1.064060I$	$-2.40362 + 4.79530I$	$-7.96169 - 4.74931I$
$u = 0.964482 - 0.279763I$ $a = -0.083033 + 0.734831I$ $b = -0.294363 + 1.055310I$	$-2.40362 - 4.79530I$	$-7.96169 + 4.74931I$
$u = 0.964482 - 0.279763I$ $a = 0.444907 - 1.284300I$ $b = 0.885771 - 1.064060I$	$-2.40362 - 4.79530I$	$-7.96169 + 4.74931I$
$u = 0.554516 + 0.760407I$ $a = -1.32940 - 0.80475I$ $b = 0.958462 - 0.405342I$	$0.46960 - 5.37963I$	$-4.19743 + 9.12512I$
$u = 0.554516 + 0.760407I$ $a = 0.05645 + 1.69365I$ $b = -0.58307 + 1.32126I$	$0.46960 - 5.37963I$	$-4.19743 + 9.12512I$
$u = 0.554516 - 0.760407I$ $a = -1.32940 + 0.80475I$ $b = 0.958462 + 0.405342I$	$0.46960 + 5.37963I$	$-4.19743 - 9.12512I$
$u = 0.554516 - 0.760407I$ $a = 0.05645 - 1.69365I$ $b = -0.58307 - 1.32126I$	$0.46960 + 5.37963I$	$-4.19743 - 9.12512I$
$u = 0.830035 + 0.659658I$ $a = -0.713804 - 0.720140I$ $b = -0.595408 - 0.656952I$	$3.07705 + 3.54112I$	$-1.03463 - 4.96095I$
$u = 0.830035 + 0.659658I$ $a = 0.147631 + 1.213210I$ $b = -1.71953 + 0.43289I$	$3.07705 + 3.54112I$	$-1.03463 - 4.96095I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.830035 - 0.659658I$ $a = -0.713804 + 0.720140I$ $b = -0.595408 + 0.656952I$	$3.07705 - 3.54112I$	$-1.03463 + 4.96095I$
$u = 0.830035 - 0.659658I$ $a = 0.147631 - 1.213210I$ $b = -1.71953 - 0.43289I$	$3.07705 - 3.54112I$	$-1.03463 + 4.96095I$
$u = 0.649973 + 0.864864I$ $a = 0.697455 + 1.027760I$ $b = -0.42990 + 1.55194I$	$3.83685 - 2.52949I$	$4.23245 + 4.01766I$
$u = 0.649973 + 0.864864I$ $a = -0.31224 - 1.76739I$ $b = 0.211989 - 0.294922I$	$3.83685 - 2.52949I$	$4.23245 + 4.01766I$
$u = 0.649973 - 0.864864I$ $a = 0.697455 - 1.027760I$ $b = -0.42990 - 1.55194I$	$3.83685 + 2.52949I$	$4.23245 - 4.01766I$
$u = 0.649973 - 0.864864I$ $a = -0.31224 + 1.76739I$ $b = 0.211989 + 0.294922I$	$3.83685 + 2.52949I$	$4.23245 - 4.01766I$
$u = -0.493988 + 0.765361I$ $a = 0.382874 + 1.353590I$ $b = 1.86841 - 0.17622I$	$0.54175 + 1.53117I$	$-4.65772 - 1.00690I$
$u = -0.493988 + 0.765361I$ $a = 0.10514 + 2.22225I$ $b = 1.14356 + 0.92471I$	$0.54175 + 1.53117I$	$-4.65772 - 1.00690I$
$u = -0.493988 - 0.765361I$ $a = 0.382874 - 1.353590I$ $b = 1.86841 + 0.17622I$	$0.54175 - 1.53117I$	$-4.65772 + 1.00690I$
$u = -0.493988 - 0.765361I$ $a = 0.10514 - 2.22225I$ $b = 1.14356 - 0.92471I$	$0.54175 - 1.53117I$	$-4.65772 + 1.00690I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.931263 + 0.577928I$ $a = 0.061833 + 0.835364I$ $b = -0.053936 + 0.791398I$	$-4.03363 + 0.42238I$	$-8.84374 + 0.22152I$
$u = -0.931263 + 0.577928I$ $a = 0.798239 - 1.005660I$ $b = 0.64545 - 1.53598I$	$-4.03363 + 0.42238I$	$-8.84374 + 0.22152I$
$u = -0.931263 - 0.577928I$ $a = 0.061833 - 0.835364I$ $b = -0.053936 - 0.791398I$	$-4.03363 - 0.42238I$	$-8.84374 - 0.22152I$
$u = -0.931263 - 0.577928I$ $a = 0.798239 + 1.005660I$ $b = 0.64545 + 1.53598I$	$-4.03363 - 0.42238I$	$-8.84374 - 0.22152I$
$u = 0.050425 + 0.902306I$ $a = -0.971105 - 0.521470I$ $b = 1.266010 + 0.433022I$	$8.53562 + 4.47679I$	$4.25634 - 2.05619I$
$u = 0.050425 + 0.902306I$ $a = -0.25070 - 3.19402I$ $b = 0.195047 - 1.195970I$	$8.53562 + 4.47679I$	$4.25634 - 2.05619I$
$u = 0.050425 - 0.902306I$ $a = -0.971105 + 0.521470I$ $b = 1.266010 - 0.433022I$	$8.53562 - 4.47679I$	$4.25634 + 2.05619I$
$u = 0.050425 - 0.902306I$ $a = -0.25070 + 3.19402I$ $b = 0.195047 + 1.195970I$	$8.53562 - 4.47679I$	$4.25634 + 2.05619I$
$u = 0.240873 + 0.823070I$ $a = -0.435832 - 0.301124I$ $b = -1.350300 - 0.295675I$	$6.13385 - 1.04825I$	$5.57209 + 2.15226I$
$u = 0.240873 + 0.823070I$ $a = -2.01054 - 0.70373I$ $b = 0.952566 + 0.034574I$	$6.13385 - 1.04825I$	$5.57209 + 2.15226I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.240873 - 0.823070I$ $a = -0.435832 + 0.301124I$ $b = -1.350300 + 0.295675I$	$6.13385 + 1.04825I$	$5.57209 - 2.15226I$
$u = 0.240873 - 0.823070I$ $a = -2.01054 + 0.70373I$ $b = 0.952566 - 0.034574I$	$6.13385 + 1.04825I$	$5.57209 - 2.15226I$
$u = -0.451409 + 1.054230I$ $a = -0.296134 - 0.843172I$ $b = -1.43433 + 0.61656I$	$1.41758 + 2.33776I$	$-3.67843 - 8.45528I$
$u = -0.451409 + 1.054230I$ $a = -0.757663 - 0.010345I$ $b = -0.462494 + 0.485912I$	$1.41758 + 2.33776I$	$-3.67843 - 8.45528I$
$u = -0.451409 - 1.054230I$ $a = -0.296134 + 0.843172I$ $b = -1.43433 - 0.61656I$	$1.41758 - 2.33776I$	$-3.67843 + 8.45528I$
$u = -0.451409 - 1.054230I$ $a = -0.757663 + 0.010345I$ $b = -0.462494 - 0.485912I$	$1.41758 - 2.33776I$	$-3.67843 + 8.45528I$
$u = 0.049435 + 0.845861I$ $a = 0.207488 - 1.277230I$ $b = -0.258187 + 0.328423I$	$1.91410 + 1.92268I$	$-2.04106 - 3.51220I$
$u = 0.049435 + 0.845861I$ $a = 0.337984 - 0.000584I$ $b = -1.048350 - 0.385024I$	$1.91410 + 1.92268I$	$-2.04106 - 3.51220I$
$u = 0.049435 - 0.845861I$ $a = 0.207488 + 1.277230I$ $b = -0.258187 - 0.328423I$	$1.91410 - 1.92268I$	$-2.04106 + 3.51220I$
$u = 0.049435 - 0.845861I$ $a = 0.337984 + 0.000584I$ $b = -1.048350 + 0.385024I$	$1.91410 - 1.92268I$	$-2.04106 + 3.51220I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.897625+0.782315I$ $a=\ \ 0.832278-0.699415I$ $b=\ \ 0.201018-1.010950I$	$2.09110-1.58939I$	$-6-0.989186+0.10I$
$u=-0.897625+0.782315I$ $a=\ \ 0.470717-0.079989I$ $b=-1.183550+0.290183I$	$2.09110-1.58939I$	$-6-0.989186+0.10I$
$u=-0.897625-0.782315I$ $a=\ \ 0.832278+0.699415I$ $b=\ \ 0.201018+1.010950I$	$2.09110+1.58939I$	$-6-0.989186+0.10I$
$u=-0.897625-0.782315I$ $a=\ \ 0.470717+0.079989I$ $b=-1.183550-0.290183I$	$2.09110+1.58939I$	$-6-0.989186+0.10I$
$u=\ \ 0.703597+1.001610I$ $a=\ \ 0.499128-0.446788I$ $b=\ \ 1.78903+0.93549I$	$4.09740-9.24115I$	$0.36103+8.46138I$
$u=\ \ 0.703597+1.001610I$ $a=-0.33466-1.59173I$ $b=\ \ 0.869174-0.879755I$	$4.09740-9.24115I$	$0.36103+8.46138I$
$u=\ \ 0.703597-1.001610I$ $a=\ \ 0.499128+0.446788I$ $b=\ \ 1.78903-0.93549I$	$4.09740+9.24115I$	$0.36103-8.46138I$
$u=\ \ 0.703597-1.001610I$ $a=-0.33466+1.59173I$ $b=\ \ 0.869174+0.879755I$	$4.09740+9.24115I$	$0.36103-8.46138I$
$u=\ \ 0.581465+1.085270I$ $a=\ \ 0.844122+0.246524I$ $b=-0.133944+1.010430I$	$1.52771+0.98450I$	$-3.57694-0.95161I$
$u=\ \ 0.581465+1.085270I$ $a=\ \ 0.416357+0.032259I$ $b=-1.091040-0.625348I$	$1.52771+0.98450I$	$-3.57694-0.95161I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.581465 - 1.085270I$ $a = 0.844122 - 0.246524I$ $b = -0.133944 - 1.010430I$	$1.52771 - 0.98450I$	$-3.57694 + 0.95161I$
$u = 0.581465 - 1.085270I$ $a = 0.416357 - 0.032259I$ $b = -1.091040 + 0.625348I$	$1.52771 - 0.98450I$	$-3.57694 + 0.95161I$
$u = 0.012887 + 0.754972I$ $a = 0.425777 + 0.051147I$ $b = -1.48025 + 0.48236I$	$7.88452 - 4.75608I$	$13.5087 + 12.0607I$
$u = 0.012887 + 0.754972I$ $a = -0.99123 + 5.52698I$ $b = -0.108726 - 0.155625I$	$7.88452 - 4.75608I$	$13.5087 + 12.0607I$
$u = 0.012887 - 0.754972I$ $a = 0.425777 - 0.051147I$ $b = -1.48025 - 0.48236I$	$7.88452 + 4.75608I$	$13.5087 - 12.0607I$
$u = 0.012887 - 0.754972I$ $a = -0.99123 - 5.52698I$ $b = -0.108726 + 0.155625I$	$7.88452 + 4.75608I$	$13.5087 - 12.0607I$
$u = -0.784875 + 0.966998I$ $a = -1.139390 + 0.687511I$ $b = 0.964426 + 0.159897I$	$2.67417 + 7.77252I$	$3.94128 - 5.80679I$
$u = -0.784875 + 0.966998I$ $a = 0.290769 - 1.311760I$ $b = -0.62633 - 1.30213I$	$2.67417 + 7.77252I$	$3.94128 - 5.80679I$
$u = -0.784875 - 0.966998I$ $a = -1.139390 - 0.687511I$ $b = 0.964426 - 0.159897I$	$2.67417 - 7.77252I$	$3.94128 + 5.80679I$
$u = -0.784875 - 0.966998I$ $a = 0.290769 + 1.311760I$ $b = -0.62633 + 1.30213I$	$2.67417 - 7.77252I$	$3.94128 + 5.80679I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.752748+1.104470I$ $a=-0.602310+0.801496I$ $b=0.435953+0.655547I$	$-2.43760+5.76392I$	$-6.00000-5.84184I$
$u=-0.752748+1.104470I$ $a=0.82699-1.30167I$ $b=-1.00751-1.53836I$	$-2.43760+5.76392I$	$-6.00000-5.84184I$
$u=-0.752748-1.104470I$ $a=-0.602310-0.801496I$ $b=0.435953-0.655547I$	$-2.43760-5.76392I$	$-6.00000+5.84184I$
$u=-0.752748-1.104470I$ $a=0.82699+1.30167I$ $b=-1.00751+1.53836I$	$-2.43760-5.76392I$	$-6.00000+5.84184I$
$u=0.64868+1.27209I$ $a=-0.668947-0.583415I$ $b=0.624552-0.835714I$	$0.62783-10.73630I$	0
$u=0.64868+1.27209I$ $a=1.02496+1.32516I$ $b=-1.09433+1.14792I$	$0.62783-10.73630I$	0
$u=0.64868-1.27209I$ $a=-0.668947+0.583415I$ $b=0.624552+0.835714I$	$0.62783+10.73630I$	0
$u=0.64868-1.27209I$ $a=1.02496-1.32516I$ $b=-1.09433-1.14792I$	$0.62783+10.73630I$	0
$u=0.02554+1.66020I$ $a=-1.70704-0.04770I$ $b=1.78182-0.29395I$	$11.74880+0.92694I$	0
$u=0.02554+1.66020I$ $a=-0.1091770+0.0135728I$ $b=0.162309+0.239459I$	$11.74880+0.92694I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.02554 - 1.66020I$ $a = -1.70704 + 0.04770I$ $b = 1.78182 + 0.29395I$	$11.74880 - 0.92694I$	0
$u = 0.02554 - 1.66020I$ $a = -0.1091770 - 0.0135728I$ $b = 0.162309 - 0.239459I$	$11.74880 - 0.92694I$	0

III. $\boldsymbol{I_3^u = \langle -22u^{12}a + 31u^{12} + \cdots + 12a + 9,\ 6u^{12}a + 4u^{12} + \cdots - 6a + 38,\ u^{13} - 2u^{12} + \cdots + 3u + 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} a \\ 1.15789au^{12} - 1.63158u^{12} + \cdots - 0.631579a - 0.473684 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 0.0526316au^{12} - 1.21053u^{12} + \cdots + 1.78947a - 1.15789 \\ 3.52632au^{12} - 5.10526u^{12} + \cdots - 1.10526a + 1.42105 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0.631579au^{12} - 0.192982u^{12} + \cdots - 1.52632a + 1.77193 \\ -1.68421au^{12} + 2.40351u^{12} + \cdots + 0.736842a + 0.385965 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.631579au^{12} + 1.52632u^{12} + \cdots - 0.473684a + 1.89474 \\ 2u^{11} - 4u^{10} + \cdots + 8u + 2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.10526au^{12} - 0.578947u^{12} + \cdots + 2.42105a - 3.68421 \\ 1.15789au^{12} - 3.63158u^{12} + \cdots - 0.631579a + 5.52632 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.631579au^{12} + 1.52632u^{12} + \cdots - 0.473684a + 1.89474 \\ -0.789474au^{12} + 0.157895u^{12} + \cdots + 1.15789a + 1.36842 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.42105au^{12} + 0.684211u^{12} + \cdots + 0.684211a - 3.73684 \\ -0.736842au^{12} - 1.05263u^{12} + \cdots + 3.94737a - 0.789474 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= -u^{12} - u^{11} + 3u^{10} - 14u^9 + 36u^8 - 53u^7 + 81u^6 - 77u^5 + 87u^4 - 51u^3 + 43u^2 - 9u - 3$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^{26} + 4u^{25} + \cdots + 72u + 24$
c_2	$(u^{13} - 5u^{12} + \cdots + 20u + 7)^2$
c_4, c_9	$3(3u^{26} + 44u^{24} + \cdots + 25358u^2 + 3901)$
c_5, c_{10}	$3(3u^{26} + 3u^{25} + \cdots - 8u + 1)$
c_6, c_8	$u^{26} + 11u^{24} + \cdots + 17u^2 + 3$
c_7	$(u^{13} + 2u^{12} + \cdots + 3u - 1)^2$
c_{11}, c_{12}	$(u^{13} - 2u^{12} + \cdots + 3u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^{26} + 24y^{25} + \cdots + 1344y + 576$
c_2	$(y^{13} - y^{12} + \cdots + 176y - 49)^2$
c_4, c_9	$9(3y^{13} + 44y^{12} + \cdots + 25358y + 3901)^2$
c_5, c_{10}	$9(9y^{26} - 159y^{25} + \cdots - 26y + 1)$
c_6, c_8	$y^{26} + 22y^{25} + \cdots + 102y + 9$
c_7, c_{11}, c_{12}	$(y^{13} + 12y^{12} + \cdots + 13y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.456698 + 0.978502I$ $a = 1.091760 + 0.643230I$ $b = 1.25818 - 0.77830I$	$1.70610 + 1.75748I$	$3.25753 + 1.63211I$
$u = -0.456698 + 0.978502I$ $a = -1.24923 - 0.92903I$ $b = -1.68596 + 1.20474I$	$1.70610 + 1.75748I$	$3.25753 + 1.63211I$
$u = -0.456698 - 0.978502I$ $a = 1.091760 - 0.643230I$ $b = 1.25818 + 0.77830I$	$1.70610 - 1.75748I$	$3.25753 - 1.63211I$
$u = -0.456698 - 0.978502I$ $a = -1.24923 + 0.92903I$ $b = -1.68596 - 1.20474I$	$1.70610 - 1.75748I$	$3.25753 - 1.63211I$
$u = 0.780947 + 0.875360I$ $a = 0.939523 + 0.590319I$ $b = 0.050081 + 0.784745I$	$1.59722 + 2.60071I$	$-4.14222 - 5.54834I$
$u = 0.780947 + 0.875360I$ $a = 0.701024 + 0.533622I$ $b = -1.148630 - 0.151348I$	$1.59722 + 2.60071I$	$-4.14222 - 5.54834I$
$u = 0.780947 - 0.875360I$ $a = 0.939523 - 0.590319I$ $b = 0.050081 - 0.784745I$	$1.59722 - 2.60071I$	$-4.14222 + 5.54834I$
$u = 0.780947 - 0.875360I$ $a = 0.701024 - 0.533622I$ $b = -1.148630 + 0.151348I$	$1.59722 - 2.60071I$	$-4.14222 + 5.54834I$
$u = 0.690962 + 0.954550I$ $a = -0.803327 - 0.072506I$ $b = 0.847547 + 0.024766I$	$1.87579 - 8.12356I$	$-4.48580 + 9.21675I$
$u = 0.690962 + 0.954550I$ $a = 0.24451 + 1.54178I$ $b = -0.573849 + 1.111810I$	$1.87579 - 8.12356I$	$-4.48580 + 9.21675I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.690962 - 0.954550I$ $a = -0.803327 + 0.072506I$ $b = 0.847547 - 0.024766I$	$1.87579 + 8.12356I$	$-4.48580 - 9.21675I$
$u = 0.690962 - 0.954550I$ $a = 0.24451 - 1.54178I$ $b = -0.573849 - 1.111810I$	$1.87579 + 8.12356I$	$-4.48580 - 9.21675I$
$u = 0.064732 + 1.235320I$ $a = -0.383941 + 0.050840I$ $b = 1.020450 - 0.441007I$	$9.78578 - 5.01236I$	$6.45767 + 6.26552I$
$u = 0.064732 + 1.235320I$ $a = -0.75059 + 1.99999I$ $b = -0.107730 - 0.435609I$	$9.78578 - 5.01236I$	$6.45767 + 6.26552I$
$u = 0.064732 - 1.235320I$ $a = -0.383941 - 0.050840I$ $b = 1.020450 + 0.441007I$	$9.78578 + 5.01236I$	$6.45767 - 6.26552I$
$u = 0.064732 - 1.235320I$ $a = -0.75059 - 1.99999I$ $b = -0.107730 + 0.435609I$	$9.78578 + 5.01236I$	$6.45767 - 6.26552I$
$u = 0.030983 + 0.707445I$ $a = 0.705239 + 0.334856I$ $b = -1.43425 - 0.44103I$	$7.63535 + 4.59295I$	$-10.45011 + 2.14951I$
$u = 0.030983 + 0.707445I$ $a = -0.68314 - 5.26527I$ $b = 0.223276 - 0.607048I$	$7.63535 + 4.59295I$	$-10.45011 + 2.14951I$
$u = 0.030983 - 0.707445I$ $a = 0.705239 - 0.334856I$ $b = -1.43425 + 0.44103I$	$7.63535 - 4.59295I$	$-10.45011 - 2.14951I$
$u = 0.030983 - 0.707445I$ $a = -0.68314 + 5.26527I$ $b = 0.223276 + 0.607048I$	$7.63535 - 4.59295I$	$-10.45011 - 2.14951I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.00114+1.63210I$ $a=-1.76445+0.00971I$ $b=\ \ 1.72434-0.28475I$	$11.84210+0.83470I$	$21.9422+18.2258I$
$u=-0.00114+1.63210I$ $a=-0.084459-0.134146I$ $b=\ \ 0.245040-0.012226I$	$11.84210+0.83470I$	$21.9422+18.2258I$
$u=-0.00114-1.63210I$ $a=-1.76445-0.00971I$ $b=\ \ 1.72434+0.28475I$	$11.84210-0.83470I$	$21.9422-18.2258I$
$u=-0.00114-1.63210I$ $a=-0.084459+0.134146I$ $b=\ \ 0.245040+0.012226I$	$11.84210-0.83470I$	$21.9422-18.2258I$
$u=-0.219578$ $a=\ \ 2.03709+4.15875I$ $b=-0.918493-0.193390I$	5.13740	1.84150
$u=-0.219578$ $a=\ \ 2.03709-4.15875I$ $b=-0.918493+0.193390I$	5.13740	1.84150

IV. $\boldsymbol{I_4^u = \langle -u^5 - 2u^4 - 3u^3 - 3u^2 + b - 2u,\ -u^4 - 2u^3 - 4u^2 + a - 3u - 3,\ u^6 + 2u^5 + 4u^4 + 4u^3 + 4u^2 + u + 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^4 + 2u^3 + 4u^2 + 3u + 3 \\ u^5 + 2u^4 + 3u^3 + 3u^2 + 2u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^4 + 2u^3 + 3u^2 + 3u + 2 \\ u^5 + u^4 + 3u^3 + u^2 + 2u - 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^5 + 2u^4 + 3u^3 + 2u^2 + u - 1 \\ -u^5 - 2u^4 - 4u^3 - 4u^2 - 3u - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^4 + 2u^3 + 3u^2 + 3u + 2 \\ u^5 + 2u^4 + 4u^3 + 3u^2 + 3u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^5 + 2u^4 + 4u^3 + 4u^2 + 3u \\ -u^4 - 2u^3 - 3u^2 - 3u - 2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^4 + 2u^3 + 3u^2 + 3u + 2 \\ u^5 + u^4 + 3u^3 + u^2 + 2u - 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^5 + 2u^4 + 3u^3 + 2u^2 + u - 1 \\ -u^5 - 2u^4 - 4u^3 - 4u^2 - 3u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u^5 + 14u^4 + 21u^3 + 23u^2 + 18u + 3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^6 - y^5 - 4y^4 + 5y^3 + 13y^2 + 6y + 1$
c_2	$y^6 - y^5 + 8y^4 - 7y^3 + 9y^2 - 2y + 1$
c_4, c_9	y^6
c_5, c_{10}	$y^6 + 3y^5 + 4y^4 + 5y^3 + 5y^2 + 2y + 1$
c_6, c_8	$y^6 + 2y^5 + 5y^4 + 5y^3 + 4y^2 + 3y + 1$
c_7, c_{11}, c_{12}	$y^6 + 4y^5 + 8y^4 + 14y^3 + 16y^2 + 7y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.937424 + 0.916243I$ $a = 0.469690 - 0.964836I$ $b = -0.155981 - 1.227730I$	$-3.99825 + 3.41127I$	$-10.42820 - 0.63715I$
$u = -0.937424 - 0.916243I$ $a = 0.469690 + 0.964836I$ $b = -0.155981 + 1.227730I$	$-3.99825 - 3.41127I$	$-10.42820 + 0.63715I$
$u = -0.096993 + 1.308890I$ $a = -0.272522 - 0.634620I$ $b = 0.456483 + 0.601395I$	$4.36362 + 4.05299I$	$6.62312 - 1.95617I$
$u = -0.096993 - 1.308890I$ $a = -0.272522 + 0.634620I$ $b = 0.456483 - 0.601395I$	$4.36362 - 4.05299I$	$6.62312 + 1.95617I$
$u = 0.034417 + 0.580231I$ $a = 1.80283 + 1.48709I$ $b = -0.800501 + 0.710292I$	$1.27956 - 3.69612I$	$-3.19491 + 7.18248I$
$u = 0.034417 - 0.580231I$ $a = 1.80283 - 1.48709I$ $b = -0.800501 - 0.710292I$	$1.27956 + 3.69612I$	$-3.19491 - 7.18248I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_3	$(u^6 - 3u^5 + \cdots - 2u + 1)(u^{26} + 4u^{25} + \cdots + 72u + 24)$ $\cdot (u^{39} - u^{38} + \cdots - 288u + 24)(u^{72} + u^{71} + \cdots + 2338u + 157)$
c_2	$(u^6 + 3u^5 + 4u^4 + u^3 - u^2 + 1)(u^{13} - 5u^{12} + \cdots + 20u + 7)^2$ $\cdot ((u^{36} + 3u^{35} + \cdots - 4u + 1)^2)(u^{39} - 6u^{38} + \cdots + 577u + 284)$
c_4, c_9	$9u^6(3u^{26} + 44u^{24} + \cdots + 25358u^2 + 3901)$ $\cdot ((u^{36} - u^{35} + \cdots - 414u + 81)^2)(3u^{39} - 9u^{38} + \cdots + 384u + 128)$
c_5, c_{10}	$9(u^6 + u^5 + \cdots + u^2 + 1)(3u^{26} + 3u^{25} + \cdots - 8u + 1)$ $\cdot (3u^{39} - 15u^{38} + \cdots + 24u + 17)(u^{72} - 10u^{70} + \cdots - 504u + 281)$
c_6, c_8	$(u^6 + u^4 - u^3 + 2u^2 - u + 1)(u^{26} + 11u^{24} + \cdots + 17u^2 + 3)$ $\cdot (u^{39} + 4u^{37} + \cdots - 21u + 3)(u^{72} + u^{71} + \cdots + 112u + 263)$
c_7	$(u^6 - 2u^5 + 4u^4 - 4u^3 + 4u^2 - u + 1)(u^{13} + 2u^{12} + \cdots + 3u - 1)^2$ $\cdot ((u^{36} - 2u^{35} + \cdots - 48u + 19)^2)(u^{39} + 3u^{38} + \cdots + 97u + 28)$
c_{11}, c_{12}	$(u^6 + 2u^5 + 4u^4 + 4u^3 + 4u^2 + u + 1)(u^{13} - 2u^{12} + \cdots + 3u + 1)^2$ $\cdot ((u^{36} - 2u^{35} + \cdots - 48u + 19)^2)(u^{39} + 3u^{38} + \cdots + 97u + 28)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3	$(y^6 - y^5 + \cdots + 6y + 1)(y^{26} + 24y^{25} + \cdots + 1344y + 576)$ $\cdot (y^{39} - 13y^{38} + \cdots + 9024y - 576)$ $\cdot (y^{72} + 31y^{71} + \cdots - 3034000y + 24649)$
c_2	$(y^6 - y^5 + 8y^4 - 7y^3 + 9y^2 - 2y + 1)(y^{13} - y^{12} + \cdots + 176y - 49)^2$ $\cdot (y^{36} - 5y^{35} + \cdots - 12y + 1)^2$ $\cdot (y^{39} + 10y^{38} + \cdots + 1402473y - 80656)$
c_4, c_9	$81y^6(3y^{13} + 44y^{12} + \cdots + 25358y + 3901)^2$ $\cdot (y^{36} + 25y^{35} + \cdots + 64638y + 6561)^2$ $\cdot (9y^{39} + 165y^{38} + \cdots + 188416y - 16384)$
c_5, c_{10}	$81(y^6 + 3y^5 + \cdots + 2y + 1)(9y^{26} - 159y^{25} + \cdots - 26y + 1)$ $\cdot (9y^{39} + 147y^{38} + \cdots - 7176y - 289)$ $\cdot (y^{72} - 20y^{71} + \cdots + 2867332y + 78961)$
c_6, c_8	$(y^6 + 2y^5 + \cdots + 3y + 1)(y^{26} + 22y^{25} + \cdots + 102y + 9)$ $\cdot (y^{39} + 8y^{38} + \cdots + 69y - 9)(y^{72} + 35y^{71} + \cdots + 2571694y + 69169)$
c_7, c_{11}, c_{12}	$(y^6 + 4y^5 + 8y^4 + 14y^3 + 16y^2 + 7y + 1)$ $\cdot ((y^{13} + 12y^{12} + \cdots + 13y - 1)^2)(y^{36} + 18y^{35} + \cdots + 5182y + 361)^2$ $\cdot (y^{39} + 19y^{38} + \cdots + 3249y - 784)$