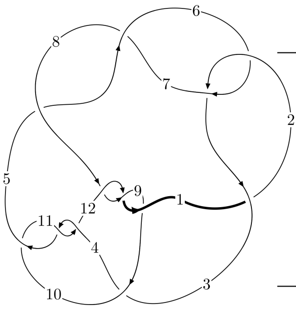
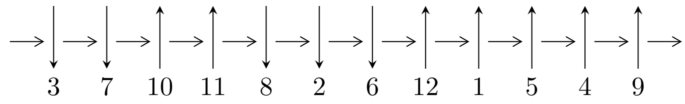
$12a_{0642}$ $(K12a_{0642})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-2.08528 \times 10^{21} u^{65} + 3.42453 \times 10^{21} u^{64} + \cdots + 2.45923 \times 10^{21} b - 6.71501 \times 10^{21}, \\
&- 7.92933 \times 10^{20} u^{65} + 2.33303 \times 10^{21} u^{64} + \cdots + 7.37769 \times 10^{21} a - 1.03514 \times 10^{21},\ u^{66} - 2u^{65} + \cdots + 5u -
\end{aligned}$$

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

$$I_3^u = \langle u^2 a - au + u^2 + b - u + 1,\ 2u^2 a + a^2 - 2au + 2u^2 - u + 1,\ u^3 - u^2 + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 75 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.

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$\boldsymbol{I_1^u = \langle -2.09\times10^{21}u^{65}+3.42\times10^{21}u^{64}+\cdots+2.46\times10^{21}b-6.72\times10^{21},\ -7.93\times10^{20}u^{65}+2.33\times10^{21}u^{64}+\cdots+7.38\times10^{21}a-1.04\times10^{21},\ u^{66}-2u^{65}+\cdots+5u-3\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^2+1\\-u^2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0.107477u^{65}-0.316227u^{64}+\cdots+4.20310u+0.140307\\0.847942u^{65}-1.39252u^{64}+\cdots+1.15079u+2.73053\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.116848u^{65}+0.169205u^{64}+\cdots+7.20302u-0.938417\\-0.135801u^{65}-0.253372u^{64}+\cdots+3.19813u+0.135182\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0.435419u^{65}-0.831909u^{64}+\cdots-2.53069u+0.102436\\-0.849654u^{65}+0.956704u^{64}+\cdots+1.71311u-2.32719\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-u^3\\u^5-u^3+u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}u^5+u\\-u^7+u^5-2u^3+u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}0.808905u^{65}-0.823841u^{64}+\cdots-1.79298u+6.02411\\-0.647456u^{65}+0.938023u^{64}+\cdots+1.14605u-2.05947\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-0.228635u^{65}+0.368246u^{64}+\cdots+5.73814u-0.217095\\0.0421408u^{65}-0.505020u^{64}+\cdots+2.54989u+1.29366\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{613039727532919174366 9}{1229615623032466676507}u^{65} - \frac{9723677310654894627572}{1229615623032466676507}u^{64}+\cdots+\frac{2087926641299656694141 0}{1229615623032466676507}u+\frac{2314994903662793689497 3}{1229615623032466676507}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_7	$u^{66} + 16u^{65} + \cdots + 151u + 9$
c_2, c_6	$u^{66} - 2u^{65} + \cdots + 5u - 3$
c_3	$u^{66} + u^{65} + \cdots + 1808u + 1480$
c_4, c_{10}, c_{11}	$u^{66} - u^{65} + \cdots - 32u + 8$
c_8, c_9, c_{12}	$u^{66} - 4u^{65} + \cdots - 12u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_7	$y^{66} + 72y^{65} + \cdots + 1949y + 81$
c_2, c_6	$y^{66} - 16y^{65} + \cdots - 151y + 9$
c_3	$y^{66} - 25y^{65} + \cdots + 8713216y + 2190400$
c_4, c_{10}, c_{11}	$y^{66} + 59y^{65} + \cdots - 128y + 64$
c_8, c_9, c_{12}	$y^{66} - 66y^{65} + \cdots + 210y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.940880+0.389587I$ $a=\ \ 0.801166-0.701373I$ $b=\ \ 0.261406+0.593445I$	$-5.12964+6.16163I$	$-3.04372-8.05147I$
$u=-0.940880-0.389587I$ $a=\ \ 0.801166+0.701373I$ $b=\ \ 0.261406-0.593445I$	$-5.12964-6.16163I$	$-3.04372+8.05147I$
$u=-1.02149$ $a=-1.32124$ $b=-0.413413$	2.55529	4.40390
$u=-0.796362+0.550324I$ $a=-0.924966-0.099092I$ $b=\ \ 0.43221-1.57388I$	$3.14358+2.21788I$	$4.13427-2.24025I$
$u=-0.796362-0.550324I$ $a=-0.924966+0.099092I$ $b=\ \ 0.43221+1.57388I$	$3.14358-2.21788I$	$4.13427+2.24025I$
$u=\ \ 1.046540+0.097833I$ $a=\ \ 1.322190-0.020742I$ $b=\ \ 0.397058-0.080498I$	$-1.46918+3.46747I$	0
$u=\ \ 1.046540-0.097833I$ $a=\ \ 1.322190+0.020742I$ $b=\ \ 0.397058+0.080498I$	$-1.46918-3.46747I$	0
$u=\ \ 0.921469+0.129566I$ $a=-0.661877-0.412132I$ $b=\ \ 0.514033+0.681154I$	$-6.59268+0.97290I$	$-7.57653-0.39847I$
$u=\ \ 0.921469-0.129566I$ $a=-0.661877+0.412132I$ $b=\ \ 0.514033-0.681154I$	$-6.59268-0.97290I$	$-7.57653+0.39847I$
$u=\ \ 0.833726+0.384546I$ $a=-0.587442-0.795014I$ $b=-0.144390+0.286926I$	$-0.18506-3.20503I$	$2.36874+8.90166I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.833726 - 0.384546I$ $a = -0.587442 + 0.795014I$ $b = -0.144390 - 0.286926I$	$-0.18506 + 3.20503I$	$2.36874 - 8.90166I$
$u = \quad 0.990925 + 0.475204I$ $a = \quad 0.428686 + 0.120652I$ $b = -0.10012 - 1.70913I$	$5.36492 - 5.88722I$	0
$u = \quad 0.990925 - 0.475204I$ $a = \quad 0.428686 - 0.120652I$ $b = -0.10012 + 1.70913I$	$5.36492 + 5.88722I$	0
$u = -0.498795 + 0.739168I$ $a = -1.153080 - 0.711498I$ $b = \quad 0.622959 - 1.122100I$	$4.16450 + 2.72632I$	$6.92245 - 3.37892I$
$u = -0.498795 - 0.739168I$ $a = -1.153080 + 0.711498I$ $b = \quad 0.622959 + 1.122100I$	$4.16450 - 2.72632I$	$6.92245 + 3.37892I$
$u = -1.029240 + 0.415785I$ $a = -0.304326 + 0.230817I$ $b = \quad 0.01201 - 1.76238I$	$0.44075 + 9.86566I$	0
$u = -1.029240 - 0.415785I$ $a = -0.304326 - 0.230817I$ $b = \quad 0.01201 + 1.76238I$	$0.44075 - 9.86566I$	0
$u = -0.793049 + 0.384644I$ $a = -1.47843 + 0.13514I$ $b = -0.776296 - 0.191562I$	$-3.25737 + 1.93313I$	$0.42721 - 3.82999I$
$u = -0.793049 - 0.384644I$ $a = -1.47843 - 0.13514I$ $b = -0.776296 + 0.191562I$	$-3.25737 - 1.93313I$	$0.42721 + 3.82999I$
$u = -0.959975 + 0.624161I$ $a = -0.499021 - 0.214013I$ $b = \quad 0.15361 - 1.51024I$	$2.82571 + 2.19205I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.959975-0.624161I$ $a=-0.499021+0.214013I$ $b=\ \ 0.15361+1.51024I$	$2.82571-2.19205I$	0
$u=-0.886053+0.741340I$ $a=-0.89572-1.29867I$ $b=\ \ 0.177451-1.335260I$	$-1.92250+2.81816I$	0
$u=-0.886053-0.741340I$ $a=-0.89572+1.29867I$ $b=\ \ 0.177451+1.335260I$	$-1.92250-2.81816I$	0
$u=\ \ 0.882438+0.780869I$ $a=\ \ 0.699653-0.793108I$ $b=-0.180230-1.231910I$	$4.00172-2.93689I$	0
$u=\ \ 0.882438-0.780869I$ $a=\ \ 0.699653+0.793108I$ $b=-0.180230+1.231910I$	$4.00172+2.93689I$	0
$u=\ \ 0.356962+0.735559I$ $a=\ \ 1.16102-0.91617I$ $b=-0.668874-1.010960I$	$7.41551+1.48844I$	$10.63091-0.75571I$
$u=\ \ 0.356962-0.735559I$ $a=\ \ 1.16102+0.91617I$ $b=-0.668874+1.010960I$	$7.41551-1.48844I$	$10.63091+0.75571I$
$u=\ \ 0.727878+0.303493I$ $a=\ \ 1.48101+0.77779I$ $b=-0.88271-2.24176I$	$-3.78561-1.23006I$	$1.98020+5.99169I$
$u=\ \ 0.727878-0.303493I$ $a=\ \ 1.48101-0.77779I$ $b=-0.88271+2.24176I$	$-3.78561+1.23006I$	$1.98020-5.99169I$
$u=-0.248411+0.746724I$ $a=-1.07892-1.06631I$ $b=\ \ 0.658592-0.929096I$	$2.98364-5.69446I$	$6.38560+3.41468I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.248411 - 0.746724I$ $a = -1.07892 + 1.06631I$ $b = 0.658592 + 0.929096I$	$2.98364 + 5.69446I$	$6.38560 - 3.41468I$
$u = -0.762533 + 0.185034I$ $a = 0.400057 - 0.427963I$ $b = -0.335136 + 0.241912I$	$-1.264720 + 0.575310I$	$-4.44845 - 0.83683I$
$u = -0.762533 - 0.185034I$ $a = 0.400057 + 0.427963I$ $b = -0.335136 - 0.241912I$	$-1.264720 - 0.575310I$	$-4.44845 + 0.83683I$
$u = 0.849055 + 0.877486I$ $a = 0.144726 - 0.873025I$ $b = -0.025755 - 1.136960I$	$2.96927 + 3.52515I$	0
$u = 0.849055 - 0.877486I$ $a = 0.144726 + 0.873025I$ $b = -0.025755 + 1.136960I$	$2.96927 - 3.52515I$	0
$u = 0.887168 + 0.853480I$ $a = 0.936403 - 0.683518I$ $b = -0.229264 - 1.107390I$	$4.14950 - 1.92316I$	0
$u = 0.887168 - 0.853480I$ $a = 0.936403 + 0.683518I$ $b = -0.229264 + 1.107390I$	$4.14950 + 1.92316I$	0
$u = 0.825576 + 0.913463I$ $a = -0.59888 + 3.00432I$ $b = 1.19791 + 3.03712I$	$9.28839 + 8.00052I$	0
$u = 0.825576 - 0.913463I$ $a = -0.59888 - 3.00432I$ $b = 1.19791 - 3.03712I$	$9.28839 - 8.00052I$	0
$u = -0.884770 + 0.860589I$ $a = -0.212411 - 0.810921I$ $b = 0.040113 - 1.187130I$	$7.38355 + 0.47295I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.884770 - 0.860589I$ $a = -0.212411 + 0.810921I$ $b = 0.040113 + 1.187130I$	$7.38355 - 0.47295I$	0
$u = -0.907494 + 0.841916I$ $a = 2.68354 + 3.61420I$ $b = -0.25692 + 4.58473I$	$2.86142 + 3.13275I$	0
$u = -0.907494 - 0.841916I$ $a = 2.68354 - 3.61420I$ $b = -0.25692 - 4.58473I$	$2.86142 - 3.13275I$	0
$u = -0.854780 + 0.913777I$ $a = 0.95509 + 2.99116I$ $b = -0.97675 + 3.23830I$	$14.5393 - 3.2940I$	0
$u = -0.854780 - 0.913777I$ $a = 0.95509 - 2.99116I$ $b = -0.97675 - 3.23830I$	$14.5393 + 3.2940I$	0
$u = 0.928525 + 0.839216I$ $a = 0.267321 - 0.699993I$ $b = -0.044132 - 1.250160I$	$4.02096 - 4.36836I$	0
$u = 0.928525 - 0.839216I$ $a = 0.267321 + 0.699993I$ $b = -0.044132 + 1.250160I$	$4.02096 + 4.36836I$	0
$u = -0.935049 + 0.841580I$ $a = -0.997222 - 0.708350I$ $b = 0.164677 - 1.077480I$	$7.22562 + 5.84884I$	0
$u = -0.935049 - 0.841580I$ $a = -0.997222 + 0.708350I$ $b = 0.164677 + 1.077480I$	$7.22562 - 5.84884I$	0
$u = 0.886666 + 0.900213I$ $a = -1.43168 + 3.00902I$ $b = 0.70096 + 3.51971I$	$12.21740 - 1.91088I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.886666 - 0.900213I$ $a = -1.43168 - 3.00902I$ $b = 0.70096 - 3.51971I$	$12.21740 + 1.91088I$	0
$u = 0.965870 + 0.830951I$ $a = 1.048900 - 0.703382I$ $b = -0.122028 - 1.049300I$	$2.60149 - 9.86130I$	0
$u = 0.965870 - 0.830951I$ $a = 1.048900 + 0.703382I$ $b = -0.122028 + 1.049300I$	$2.60149 + 9.86130I$	0
$u = 0.957311 + 0.866384I$ $a = -2.46807 + 2.30758I$ $b = -0.30755 + 3.64760I$	$11.99000 - 4.61174I$	0
$u = 0.957311 - 0.866384I$ $a = -2.46807 - 2.30758I$ $b = -0.30755 - 3.64760I$	$11.99000 + 4.61174I$	0
$u = 0.998275 + 0.835366I$ $a = -2.75742 + 1.52819I$ $b = -0.88652 + 3.29956I$	$8.7382 - 14.4571I$	0
$u = 0.998275 - 0.835366I$ $a = -2.75742 - 1.52819I$ $b = -0.88652 - 3.29956I$	$8.7382 + 14.4571I$	0
$u = -0.983999 + 0.853365I$ $a = 2.61145 + 1.85077I$ $b = 0.63135 + 3.43344I$	$14.1256 + 9.8142I$	0
$u = -0.983999 - 0.853365I$ $a = 2.61145 - 1.85077I$ $b = 0.63135 - 3.43344I$	$14.1256 - 9.8142I$	0
$u = -0.482668 + 0.473305I$ $a = 0.026115 - 1.148390I$ $b = -0.243945 - 0.319913I$	$-2.37826 + 1.37049I$	$3.17735 - 4.52175I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.482668-0.473305I$ $a=0.026115+1.148390I$ $b=-0.243945+0.319913I$	$-2.37826-1.37049I$	$3.17735+4.52175I$
$u=-0.268428+0.572165I$ $a=-0.433288+0.777956I$ $b=-0.434835+0.673053I$	$-3.09183-2.58712I$	$2.42181+3.21581I$
$u=-0.268428-0.572165I$ $a=-0.433288-0.777956I$ $b=-0.434835-0.673053I$	$-3.09183+2.58712I$	$2.42181-3.21581I$
$u=0.438013+0.335978I$ $a=0.778089+0.240873I$ $b=0.555725+0.212651I$	$0.967621+0.114990I$	$10.14067-0.04829I$
$u=0.438013-0.335978I$ $a=0.778089-0.240873I$ $b=0.555725-0.212651I$	$0.967621-0.114990I$	$10.14067+0.04829I$
$u=0.493664$ $a=1.46260$ $b=0.604228$	0.957505	14.1910

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

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

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

$$a_{10} = \begin{pmatrix} u + 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ u^2 + u - 1 \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} u + 1 \\ 0 \end{pmatrix}$$

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4u^2 - 10u + 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.877439+0.744862I$ $a=-0.662359-0.562280I$ $b=\ \ 0.215080-1.307140I$	$4.66906+2.82812I$	$11.91407-2.22005I$
$u=-0.877439-0.744862I$ $a=-0.662359+0.562280I$ $b=\ \ 0.215080+1.307140I$	$4.66906-2.82812I$	$11.91407+2.22005I$
$u=\ \ 0.754878$ $a=\ \ 1.32472$ $b=\ \ 0.569840$	0.531480	-5.82810

III.

$$\boldsymbol{I_3^u = \langle u^2a - au + u^2 + b - u + 1,\ 2u^2a + a^2 - 2au + 2u^2 - u + 1,\ u^3 - u^2 + 1\rangle}$$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.877439 + 0.744862I$ $a = -0.391035 + 0.678606I$ $b = -0.215080 + 0.107072I$	$-0.26574 - 2.82812I$	$3.50976 + 2.97945I$
$u = 0.877439 + 0.744862I$ $a = 1.71575 - 1.80317I$ $b = -0.21508 - 2.72135I$	$-0.26574 - 2.82812I$	$3.50976 + 2.97945I$
$u = 0.877439 - 0.744862I$ $a = -0.391035 - 0.678606I$ $b = -0.215080 - 0.107072I$	$-0.26574 + 2.82812I$	$3.50976 - 2.97945I$
$u = 0.877439 - 0.744862I$ $a = 1.71575 + 1.80317I$ $b = -0.21508 + 2.72135I$	$-0.26574 + 2.82812I$	$3.50976 - 2.97945I$
$u = -0.754878$ $a = -1.32472 + 1.06756I$ $b = -0.56984 - 1.41421I$	-4.40332	-3.01950
$u = -0.754878$ $a = -1.32472 - 1.06756I$ $b = -0.56984 + 1.41421I$	-4.40332	-3.01950

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$((u^3-u^2+2u-1)^3)(u^{66}+16u^{65}+\cdots+151u+9)$
c_2	$((u^3-u^2+1)^2)(u^3+u^2-1)(u^{66}-2u^{65}+\cdots+5u-3)$
c_3	$u^3(u^2+2)^3(u^{66}+u^{65}+\cdots+1808u+1480)$
c_4, c_{10}, c_{11}	$u^3(u^2+2)^3(u^{66}-u^{65}+\cdots-32u+8)$
c_6	$(u^3-u^2+1)(u^3+u^2-1)^2(u^{66}-2u^{65}+\cdots+5u-3)$
c_7	$((u^3+u^2+2u+1)^3)(u^{66}+16u^{65}+\cdots+151u+9)$
c_8, c_9	$((u-1)^6)(u+1)^3(u^{66}-4u^{65}+\cdots-12u-1)$
c_{12}	$((u-1)^3)(u+1)^6(u^{66}-4u^{65}+\cdots-12u-1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_7	$((y^3+3y^2+2y-1)^3)(y^{66}+72y^{65}+\cdots+1949y+81)$
c_2, c_6	$((y^3-y^2+2y-1)^3)(y^{66}-16y^{65}+\cdots-151y+9)$
c_3	$y^3(y+2)^6(y^{66}-25y^{65}+\cdots+8713216y+2190400)$
c_4, c_{10}, c_{11}	$y^3(y+2)^6(y^{66}+59y^{65}+\cdots-128y+64)$
c_8, c_9, c_{12}	$((y-1)^9)(y^{66}-66y^{65}+\cdots+210y+1)$