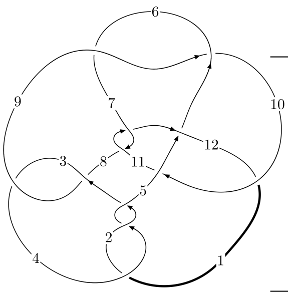
$12n_{0693}$ ($K12n_{0693}$)



A knot diagram[1]

Linearized knot diagam

$\rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow$

4 5 9 2 12 9 11 3 6 5 7 10

Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle &-1.19530 \times 10^{101} u^{27} - 5.30605 \times 10^{101} u^{26} + \cdots + 2.74772 \times 10^{105} b + 4.81437 \times 10^{105}, \\ &- 1.14694 \times 10^{104} u^{27} - 5.23246 \times 10^{104} u^{26} + \cdots + 2.69277 \times 10^{107} a + 4.77354 \times 10^{108}, \\ &u^{28} + 4u^{27} + \cdots - 75264u + 25088 \rangle \\ I_2^u = \langle &-168189u^{12} + 367074u^{11} + \cdots + 485b - 207077,\ -34213u^{12} + 74426u^{11} + \cdots + 97a - 40975, \\ &u^{13} - 3u^{12} - 3u^{11} + 4u^{10} + u^9 + 5u^8 + 12u^7 - 23u^6 - 15u^5 + 13u^4 + 12u^3 - u^2 - 3u - 1 \rangle \end{aligned}$$

$$\begin{aligned} I_1^v = \langle &a,\ -82026v^8 - 2033115v^7 + \cdots + 764761b + 1552510, \\ &7v^9 + 3v^8 + 2v^7 - 14v^6 - 23v^5 + 33v^4 - v^3 - 8v^2 + v + 1 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 50 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. $\boldsymbol{I_1^u = \langle -1.20\times 10^{101}u^{27} - 5.31\times 10^{101}u^{26} + \cdots + 2.75\times 10^{105}b + 4.81\times 10^{105},\ -1.15\times 10^{104}u^{27} - 5.23\times 10^{104}u^{26} + \cdots + 2.69\times 10^{107}a + 4.77\times 10^{108},\ u^{28} + 4u^{27} + \cdots - 75264u + 25088\rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.000425935u^{27} + 0.00194315u^{26} + \cdots + 23.7900u - 17.7273 \\ 0.0000435014u^{27} + 0.000193107u^{26} + \cdots + 1.17208u - 1.75213 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.000282338u^{27} + 0.00130937u^{26} + \cdots + 17.6311u - 10.2877 \\ 0.0000612204u^{27} + 0.000273967u^{26} + \cdots + 5.23614u - 2.64624 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.000456925u^{27} + 0.00211671u^{26} + \cdots + 25.6324u - 17.7624 \\ 0.0000693492u^{27} + 0.000324215u^{26} + \cdots + 2.03194u - 2.70300 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.000335467u^{27} + 0.00156198u^{26} + \cdots + 18.8607u - 12.1578 \\ 0.0000866890u^{27} + 0.000392041u^{26} + \cdots + 6.92109u - 3.65218 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0000436460u^{27} + 0.000197226u^{26} + \cdots + 1.36979u - 2.04087 \\ 0.0000155704u^{27} + 0.0000694627u^{26} + \cdots + 1.84303u - 0.799131 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0000475456u^{27} - 0.000214384u^{26} + \cdots - 2.60369u + 2.27196 \\ -8.68541\times 10^{-6}u^{27} - 0.0000387931u^{26} + \cdots + 0.605212u + 0.376080 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0000592164u^{27} - 0.000266688u^{26} + \cdots - 3.21282u + 2.84000 \\ 5.14630\times 10^{-7}u^{27} + 3.68556\times 10^{-6}u^{26} + \cdots + 1.08406u - 0.0509325 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.000450336u^{27} + 0.00204929u^{26} + \cdots + 25.1559u - 19.3277 \\ 0.0000492022u^{27} + 0.000219246u^{26} + \cdots + 1.32187u - 1.74134 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.000152878u^{27} - 0.000780946u^{26} + \cdots - 9.76931u - 4.69330$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_4	$u^{28} - 16u^{27} + \cdots + 419u - 49$
c_3, c_8	$u^{28} + 4u^{27} + \cdots - 75264u + 25088$
c_5	$u^{28} - 4u^{27} + \cdots + 9u - 9$
c_6, c_9	$u^{28} + 3u^{27} + \cdots + 300u + 59$
c_7, c_{11}	$u^{28} + 2u^{27} + \cdots - 1173u - 1219$
c_{10}	$u^{28} - u^{27} + \cdots - 246402u - 218849$
c_{12}	$u^{28} - u^{27} + \cdots + 26513u + 36713$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$y^{28} - 4y^{27} + \cdots - 168113y + 2401$
c_3, c_8	$y^{28} + 78y^{27} + \cdots + 603717632y + 629407744$
c_5	$y^{28} + 2y^{27} + \cdots - 657y + 81$
c_6, c_9	$y^{28} + y^{27} + \cdots - 86696y + 3481$
c_7, c_{11}	$y^{28} + 42y^{27} + \cdots + 5986831y + 1485961$
c_{10}	$y^{28} + 53y^{27} + \cdots + 367398468196y + 47894884801$
c_{12}	$y^{28} + 29y^{27} + \cdots - 4800844229y + 1347844369$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.661495 + 0.747398I$ $a = -1.101650 + 0.440671I$ $b = -0.236907 + 0.377211I$	$-2.93456 - 1.71766I$	$-11.35116 + 2.24777I$
$u = 0.661495 - 0.747398I$ $a = -1.101650 - 0.440671I$ $b = -0.236907 - 0.377211I$	$-2.93456 + 1.71766I$	$-11.35116 - 2.24777I$
$u = -0.893984 + 0.439919I$ $a = 1.294490 + 0.133923I$ $b = 0.543436 - 0.602243I$	$-0.665833 - 0.463592I$	$-8.88124 - 0.80143I$
$u = -0.893984 - 0.439919I$ $a = 1.294490 - 0.133923I$ $b = 0.543436 + 0.602243I$	$-0.665833 + 0.463592I$	$-8.88124 + 0.80143I$
$u = -0.060146 + 1.078200I$ $a = 0.399755 - 0.111241I$ $b = 0.264455 - 0.608981I$	$1.30627 + 3.65816I$	$0.62607 - 9.21590I$
$u = -0.060146 - 1.078200I$ $a = 0.399755 + 0.111241I$ $b = 0.264455 + 0.608981I$	$1.30627 - 3.65816I$	$0.62607 + 9.21590I$
$u = 1.083710 + 0.326182I$ $a = -0.046362 - 0.438180I$ $b = -0.577733 + 1.217650I$	$-5.85717 + 6.56767I$	$-13.7398 - 3.9298I$
$u = 1.083710 - 0.326182I$ $a = -0.046362 + 0.438180I$ $b = -0.577733 - 1.217650I$	$-5.85717 - 6.56767I$	$-13.7398 + 3.9298I$
$u = -0.775820 + 0.972482I$ $a = 0.054417 + 0.688396I$ $b = -0.727007 - 1.203150I$	$-5.97045 + 2.54425I$	$-12.99283 - 2.62358I$
$u = -0.775820 - 0.972482I$ $a = 0.054417 - 0.688396I$ $b = -0.727007 + 1.203150I$	$-5.97045 - 2.54425I$	$-12.99283 + 2.62358I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.617923 + 0.406438I$ $a = 0.883763 + 0.285545I$ $b = -0.084653 + 1.144210I$	$2.45728 - 1.44782I$	$-2.14877 + 4.95256I$
$u = 0.617923 - 0.406438I$ $a = 0.883763 - 0.285545I$ $b = -0.084653 - 1.144210I$	$2.45728 + 1.44782I$	$-2.14877 - 4.95256I$
$u = 0.585624 + 0.073997I$ $a = -2.22803 + 5.22433I$ $b = -0.602252 + 0.484797I$	$-2.72280 + 3.22335I$	$-17.5168 - 5.4562I$
$u = 0.585624 - 0.073997I$ $a = -2.22803 - 5.22433I$ $b = -0.602252 - 0.484797I$	$-2.72280 - 3.22335I$	$-17.5168 + 5.4562I$
$u = -0.528658$ $a = 1.02003$ $b = 0.374611$	-0.770752	-12.6200
$u = -0.034927 + 0.413671I$ $a = 0.949151 - 0.071475I$ $b = 0.603455 - 0.835991I$	$-0.83719 + 2.37006I$	$-4.55412 - 1.61124I$
$u = -0.034927 - 0.413671I$ $a = 0.949151 + 0.071475I$ $b = 0.603455 + 0.835991I$	$-0.83719 - 2.37006I$	$-4.55412 + 1.61124I$
$u = 1.45117 + 2.14148I$ $a = 0.387432 - 0.739268I$ $b = 0.38855 + 2.09377I$	$13.0799 - 5.8001I$	0
$u = 1.45117 - 2.14148I$ $a = 0.387432 + 0.739268I$ $b = 0.38855 - 2.09377I$	$13.0799 + 5.8001I$	0
$u = -1.61598 + 2.05576I$ $a = 0.526861 + 0.699488I$ $b = 0.90112 - 1.94803I$	$12.8917 + 14.5389I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.61598 - 2.05576I$ $a = 0.526861 - 0.699488I$ $b = 0.90112 + 1.94803I$	$12.8917 - 14.5389I$	0
$u = 0.68402 + 3.16013I$ $a = -0.253756 + 0.635446I$ $b = -0.88797 - 2.12249I$	$14.7956 - 5.0968I$	0
$u = 0.68402 - 3.16013I$ $a = -0.253756 - 0.635446I$ $b = -0.88797 + 2.12249I$	$14.7956 + 5.0968I$	0
$u = -3.30423$ $a = -0.685085$ $b = -1.91176$	-19.0273	0
$u = -2.12239 + 3.48864I$ $a = 0.128967 - 0.107770I$ $b = 2.33997 + 1.80408I$	$4.30987 - 2.62944I$	0
$u = -2.12239 - 3.48864I$ $a = 0.128967 + 0.107770I$ $b = 2.33997 - 1.80408I$	$4.30987 + 2.62944I$	0
$u = 0.33576 + 4.88530I$ $a = 0.000754 - 0.466782I$ $b = -0.15589 + 3.19045I$	$16.2350 - 2.8419I$	0
$u = 0.33576 - 4.88530I$ $a = 0.000754 + 0.466782I$ $b = -0.15589 - 3.19045I$	$16.2350 + 2.8419I$	0

II. $\boldsymbol{I_2^u = \langle -1.68\times 10^5 u^{12} + 3.67\times 10^5 u^{11} + \cdots + 485b - 2.07\times 10^5,\ -34213u^{12} + 74426u^{11} + \cdots + 97a - 40975,\ u^{13} - 3u^{12} + \cdots - 3u - 1\rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 352.711u^{12} - 767.278u^{11} + \cdots + 1835.11u + 422.423 \\ 346.781u^{12} - 756.854u^{11} + \cdots + 1801.01u + 426.963 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 108.392u^{12} - 229.979u^{11} + \cdots + 618.918u + 146.784 \\ -72.8722u^{12} + 159.480u^{11} + \cdots - 373.122u - 87.5443 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -850.616u^{12} + 1864.44u^{11} + \cdots - 4357.36u - 1036.63 \\ -451.551u^{12} + 986.076u^{11} + \cdots - 2337.11u - 552.301 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 256.862u^{12} - 554.955u^{11} + \cdots + 1386.02u + 329.524 \\ 26.2454u^{12} - 57.5134u^{11} + \cdots + 136.654u + 32.8907 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 108.489u^{12} - 236.922u^{11} + \cdots + 564.487u + 136.177 \\ 99.1175u^{12} - 216.994u^{11} + \cdots + 509.775u + 120.435 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -134.734u^{12} + 294.435u^{11} + \cdots - 700.140u - 168.068 \\ -63.9381u^{12} + 139.845u^{11} + \cdots - 328.381u - 77.8763 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -207.606u^{12} + 453.915u^{11} + \cdots - 1074.26u - 256.612 \\ -39.5340u^{12} + 86.2351u^{11} + \cdots - 204.540u - 48.4680 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 487.445u^{12} - 1061.71u^{11} + \cdots + 2536.25u + 590.491 \\ 337.847u^{12} - 737.219u^{11} + \cdots + 1755.27u + 416.295 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{296049}{485}u^{12} - \frac{650349}{485}u^{11} + \cdots + \frac{1491522}{485}u + \frac{340092}{485}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$u^{13} + 6u^{12} + \cdots - 3u + 1$
c_3	$u^{13} + 3u^{12} + \cdots - 3u + 1$
c_4	$u^{13} - 6u^{12} + \cdots - 3u - 1$
c_5	$u^{13} + 6u^{12} + \cdots - 3u - 1$
c_6	$u^{13} + 3u^{12} + \cdots - 3u^2 - 1$
c_7	$u^{13} + 3u^{11} + \cdots - 3u + 1$
c_8	$u^{13} - 3u^{12} + \cdots - 3u - 1$
c_9	$u^{13} - 3u^{12} + \cdots + 3u^2 + 1$
c_{10}	$u^{13} - 3u^{12} + \cdots - 6u + 1$
c_{11}	$u^{13} + 3u^{11} + \cdots - 3u - 1$
c_{12}	$u^{13} + 7u^{12} + \cdots + 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$y^{13} - 16y^{12} + \cdots - y - 1$
c_3, c_8	$y^{13} - 15y^{12} + \cdots + 7y - 1$
c_5	$y^{13} - 2y^{12} + \cdots + 15y - 1$
c_6, c_9	$y^{13} + 5y^{12} + \cdots - 6y - 1$
c_7, c_{11}	$y^{13} + 6y^{12} + \cdots - 5y - 1$
c_{10}	$y^{13} - 15y^{12} + \cdots + 2y - 1$
c_{12}	$y^{13} - 31y^{12} + \cdots + 3y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.816041 + 0.000203I$ $a = -0.43426 - 1.55421I$ $b = 0.10456 - 1.52728I$	$1.72418 - 0.65957I$	$-8.99705 - 2.64502I$
$u = 0.816041 - 0.000203I$ $a = -0.43426 + 1.55421I$ $b = 0.10456 + 1.52728I$	$1.72418 + 0.65957I$	$-8.99705 + 2.64502I$
$u = 1.128350 + 0.374297I$ $a = -0.211847 - 0.624136I$ $b = 0.210034 + 0.823435I$	$-6.59749 - 5.36054I$	$-16.7957 + 3.3098I$
$u = 1.128350 - 0.374297I$ $a = -0.211847 + 0.624136I$ $b = 0.210034 - 0.823435I$	$-6.59749 + 5.36054I$	$-16.7957 - 3.3098I$
$u = -0.556612 + 0.262804I$ $a = -1.60330 + 0.51588I$ $b = 0.332363 - 0.723799I$	$-1.55737 + 3.31191I$	$-8.81382 - 5.67289I$
$u = -0.556612 - 0.262804I$ $a = -1.60330 - 0.51588I$ $b = 0.332363 + 0.723799I$	$-1.55737 - 3.31191I$	$-8.81382 + 5.67289I$
$u = -1.312050 + 0.498669I$ $a = -0.347834 - 0.510868I$ $b = 0.221139 + 1.245340I$	$-4.99110 + 3.58519I$	$-10.54784 - 4.86342I$
$u = -1.312050 - 0.498669I$ $a = -0.347834 + 0.510868I$ $b = 0.221139 - 1.245340I$	$-4.99110 - 3.58519I$	$-10.54784 + 4.86342I$
$u = 0.00605 + 1.41713I$ $a = 0.448731 - 0.123257I$ $b = 0.561559 - 0.310550I$	$0.87702 + 3.30359I$	$-11.32603 + 0.21831I$
$u = 0.00605 - 1.41713I$ $a = 0.448731 + 0.123257I$ $b = 0.561559 + 0.310550I$	$0.87702 - 3.30359I$	$-11.32603 - 0.21831I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.314233+0.325307I$ $a=-10.02810-6.71200I$ $b=-0.433075+0.722389I$	$-3.04698+2.63834I$	$-10.8062-21.0195I$
$u=-0.314233-0.325307I$ $a=-10.02810+6.71200I$ $b=-0.433075-0.722389I$	$-3.04698-2.63834I$	$-10.8062+21.0195I$
$u=\quad 3.46490$ $a=-0.646768$ $b=-1.99317$	-18.8747	13.5730

III. $I_1^v = \langle a,\ -8.20\times10^4 v^8 - 2.03\times10^6 v^7 + \cdots + 7.65\times10^5 b + 1.55\times 10^6,\ 7v^9 + 3v^8 + \cdots + v + 1\rangle$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 0 \\ 0.107257v^8 + 2.65850v^7 + \cdots - 0.280187v - 2.03006 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ -2.14626v^8 + 0.185889v^7 + \cdots - 0.429870v - 1.30771 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.107257v^8 - 2.65850v^7 + \cdots + 0.280187v + 2.03006 \\ 1.38456v^8 + 4.21937v^7 + \cdots - 2.55986v - 1.77273 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.14626v^8 - 0.185889v^7 + \cdots + 0.429870v + 2.30771 \\ -2.14626v^8 + 0.185889v^7 + \cdots - 0.429870v - 1.30771 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.01346v^8 + 0.464403v^7 + \cdots - 1.07485v + 0.182471 \\ -7v^8 - 3v^7 - 2v^6 + 14v^5 + 23v^4 - 33v^3 + v^2 + 8v - 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.01346v^8 - 0.464403v^7 + \cdots + 2.07485v - 0.182471 \\ 7v^8 + 3v^7 + 2v^6 - 14v^5 - 23v^4 + 33v^3 - v^2 - 8v + 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1.01346v^8 - 0.464403v^7 + \cdots + 1.07485v - 0.182471 \\ 7v^8 + 3v^7 + 2v^6 - 14v^5 - 23v^4 + 33v^3 - v^2 - 8v + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -5.30121v^8 - 5.22147v^7 + \cdots + 3.83160v + 0.359036 \\ 7.44747v^8 + 5.03558v^7 + \cdots - 3.40173v + 1.94867 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{17698695}{764761}v^8 - \frac{786460}{764761}v^7 + \frac{4755547}{764761}v^6 - \frac{34014228}{764761}v^5 - \frac{35615785}{764761}v^4 + \frac{111023508}{764761}v^3 - \frac{50152809}{764761}v^2 - \frac{10570795}{764761}v - \frac{324941}{764761}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_8	u^9
c_4	$(u+1)^9$
c_5	$u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1$
c_6	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$
c_7	$u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1$
c_9	$u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1$
c_{10}, c_{12}	$u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1$
c_{11}	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_8	y^9
c_5	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_6, c_9	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_7, c_{11}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_{10}, c_{12}	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = 0.903964 + 0.094390I$ $a = 0$ $b = 0.140343 + 0.966856I$	$0.13850 - 2.09337I$	$-5.49232 + 4.08340I$
$v = 0.903964 - 0.094390I$ $a = 0$ $b = 0.140343 - 0.966856I$	$0.13850 + 2.09337I$	$-5.49232 - 4.08340I$
$v = -1.42091$ $a = 0$ $b = 0.512358$	-2.84338	-14.1380
$v = 0.476406 + 0.294981I$ $a = 0$ $b = -0.796005 + 0.733148I$	$-6.01628 - 1.33617I$	$-13.72452 - 1.86826I$
$v = 0.476406 - 0.294981I$ $a = 0$ $b = -0.796005 - 0.733148I$	$-6.01628 + 1.33617I$	$-13.72452 + 1.86826I$
$v = -0.352455 + 0.113243I$ $a = 0$ $b = -0.728966 - 0.986295I$	$-5.24306 - 7.08493I$	$-7.53426 + 10.08360I$
$v = -0.352455 - 0.113243I$ $a = 0$ $b = -0.728966 + 0.986295I$	$-5.24306 + 7.08493I$	$-7.53426 - 10.08360I$
$v = -0.53175 + 1.59553I$ $a = 0$ $b = 0.628449 + 0.875112I$	$-2.26187 - 2.45442I$	$-12.87375 + 1.42824I$
$v = -0.53175 - 1.59553I$ $a = 0$ $b = 0.628449 - 0.875112I$	$-2.26187 + 2.45442I$	$-12.87375 - 1.42824I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2	$((u-1)^9)(u^{13}+6u^{12}+\cdots-3u+1)(u^{28}-16u^{27}+\cdots+419u-49)$
c_3	$u^9(u^{13}+3u^{12}+\cdots-3u+1)(u^{28}+4u^{27}+\cdots-75264u+25088)$
c_4	$((u+1)^9)(u^{13}-6u^{12}+\cdots-3u-1)(u^{28}-16u^{27}+\cdots+419u-49)$
c_5	$(u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1)$ $\cdot(u^{13}+6u^{12}+\cdots-3u-1)(u^{28}-4u^{27}+\cdots+9u-9)$
c_6	$(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{13}+3u^{12}+\cdots-3u^2-1)(u^{28}+3u^{27}+\cdots+300u+59)$
c_7	$(u^9+u^8+\cdots+u-1)(u^{13}+3u^{11}+\cdots-3u+1)$ $\cdot(u^{28}+2u^{27}+\cdots-1173u-1219)$
c_8	$u^9(u^{13}-3u^{12}+\cdots-3u-1)(u^{28}+4u^{27}+\cdots-75264u+25088)$
c_9	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{13}-3u^{12}+\cdots+3u^2+1)(u^{28}+3u^{27}+\cdots+300u+59)$
c_{10}	$(u^9-u^8+\cdots-u+1)(u^{13}-3u^{12}+\cdots-6u+1)$ $\cdot(u^{28}-u^{27}+\cdots-246402u-218849)$
c_{11}	$(u^9-u^8+\cdots+u+1)(u^{13}+3u^{11}+\cdots-3u-1)$ $\cdot(u^{28}+2u^{27}+\cdots-1173u-1219)$
c_{12}	$(u^9-u^8+\cdots-u+1)(u^{13}+7u^{12}+\cdots+5u+1)$ $\cdot(u^{28}-u^{27}+\cdots+26513u+36713)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$((y-1)^9)(y^{13} - 16y^{12} + \cdots - y - 1)$ $\cdot (y^{28} - 4y^{27} + \cdots - 168113y + 2401)$
c_3, c_8	$y^9(y^{13} - 15y^{12} + \cdots + 7y - 1)$ $\cdot (y^{28} + 78y^{27} + \cdots + 603717632y + 629407744)$
c_5	$(y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1)$ $\cdot (y^{13} - 2y^{12} + \cdots + 15y - 1)(y^{28} + 2y^{27} + \cdots - 657y + 81)$
c_6, c_9	$(y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1)$ $\cdot (y^{13} + 5y^{12} + \cdots - 6y - 1)(y^{28} + y^{27} + \cdots - 86696y + 3481)$
c_7, c_{11}	$(y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1)$ $\cdot (y^{13} + 6y^{12} + \cdots - 5y - 1)(y^{28} + 42y^{27} + \cdots + 5986831y + 1485961)$
c_{10}	$(y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1)$ $\cdot (y^{13} - 15y^{12} + \cdots + 2y - 1)$ $\cdot (y^{28} + 53y^{27} + \cdots + 367398468196y + 47894884801)$
c_{12}	$(y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1)$ $\cdot (y^{13} - 31y^{12} + \cdots + 3y - 1)$ $\cdot (y^{28} + 29y^{27} + \cdots - 4800844229y + 1347844369)$