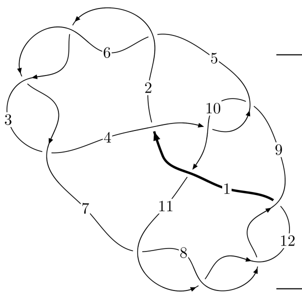
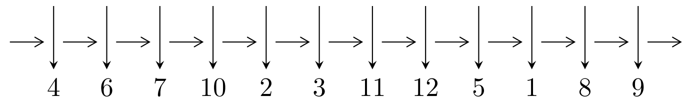
$12a_{0876}$ ($K12a_{0876}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I^u_1 = \langle u^{13} - 8u^{11} + 23u^9 - u^8 - 28u^7 + 5u^6 + 14u^5 - 7u^4 - 4u^3 + 2u^2 + b - u - 1,\ -u^8 + 5u^6 - 7u^4 + 2u^2 + a -$
$u^{14} + u^{13} - 8u^{12} - 7u^{11} + 24u^{10} + 16u^9 - 34u^8 - 11u^7 + 26u^6 - 2u^5 - 13u^4 + u^3 + 2u^2 - 3u - 1\rangle$

$I^u_2 = \langle 2u^{41} + 2u^{40} + \cdots - u^2 + b,\ -3u^{41} - 4u^{40} + \cdots + a + 1,\ u^{42} + 2u^{41} + \cdots + u + 1\rangle$

$I^u_3 = \langle b,\ a + 1,\ u^2 - u - 1\rangle$

$I^u_4 = \langle b,\ a + u - 2,\ u^2 - u - 1\rangle$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 60 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.

$$\boldsymbol{I_1^u = \langle u^{13}-8u^{11}+\cdots+b-1,\ -u^8+5u^6-7u^4+2u^2+a-1,\ u^{14}+u^{13}+\cdots-3u-1\rangle}$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} -u \\ -u^3+u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u^2+1 \\ -u^4+2u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^8-5u^6+7u^4-2u^2+1 \\ -u^{13}+8u^{11}+\cdots+u+1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^3-2u \\ u^5-3u^3+u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^7-4u^5+4u^3 \\ u^9-5u^7+7u^5-2u^3+u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^{11}-6u^9+u^8+12u^7-5u^6-8u^5+7u^4-2u^2+1 \\ u^{11}-6u^9+u^8+12u^7-5u^6-9u^5+7u^4+2u^3-2u^2+u+1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^{13}+8u^{11}+\cdots+u+2 \\ -u^{13}+8u^{11}+\cdots+u+1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u^{13}-7u^{11}+\cdots-u-1 \\ u^{13}-7u^{11}+\cdots-u-1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^{12}+6u^{10}-u^9-12u^8+5u^7+8u^6-7u^5+2u^3-u^2-u+1 \\ -u^{12}+6u^{10}-u^9-12u^8+5u^7+9u^6-7u^5-3u^4+2u^3+u^2-u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -2u^{13}+14u^{11}-2u^{10}-32u^9+16u^8+20u^7-40u^6+14u^5+30u^4-18u^3+2u^2+12u-12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{14} - 3u^{13} + \cdots - 3u - 1$
c_2, c_3, c_5 c_6, c_7, c_8 c_{11}, c_{12}	$u^{14} + u^{13} + \cdots - 3u - 1$
c_4, c_9	$u^{14} - 5u^{13} + \cdots - 8u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{14} + 7y^{13} + \cdots - 29y + 1$
c_2, c_3, c_5 c_6, c_7, c_8 c_{11}, c_{12}	$y^{14} - 17y^{13} + \cdots - 13y + 1$
c_4, c_9	$y^{14} + 5y^{13} + \cdots - 64y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.680303 + 0.531876I$ $a = -1.24132 + 1.66316I$ $b = -0.572300 - 1.150040I$	$1.04590 - 7.72861I$	$-13.6329 + 9.6019I$
$u = 0.680303 - 0.531876I$ $a = -1.24132 - 1.66316I$ $b = -0.572300 + 1.150040I$	$1.04590 + 7.72861I$	$-13.6329 - 9.6019I$
$u = -0.593521 + 0.378079I$ $a = 0.054243 - 0.515402I$ $b = -0.834976 - 0.363198I$	$-1.38750 + 2.49320I$	$-16.0799 - 7.8719I$
$u = -0.593521 - 0.378079I$ $a = 0.054243 + 0.515402I$ $b = -0.834976 + 0.363198I$	$-1.38750 - 2.49320I$	$-16.0799 + 7.8719I$
$u = 0.303532 + 0.566158I$ $a = 0.62968 - 1.83164I$ $b = -0.251015 + 1.107770I$	$3.30391 + 0.11980I$	$-7.23583 + 2.81079I$
$u = 0.303532 - 0.566158I$ $a = 0.62968 + 1.83164I$ $b = -0.251015 - 1.107770I$	$3.30391 - 0.11980I$	$-7.23583 - 2.81079I$
$u = -1.45549 + 0.12558I$ $a = 0.560799 + 0.786391I$ $b = 0.204002 - 1.257830I$	$-8.06473 + 4.40167I$	$-16.0274 - 3.4872I$
$u = -1.45549 - 0.12558I$ $a = 0.560799 - 0.786391I$ $b = 0.204002 + 1.257830I$	$-8.06473 - 4.40167I$	$-16.0274 + 3.4872I$
$u = 1.48768$ $a = 0.650213$ $b = 1.05020$	-12.8678	-19.3260
$u = 1.58880 + 0.12925I$ $a = -0.470390 + 0.414195I$ $b = -1.052550 + 0.599886I$	$-16.3668 - 6.3822I$	$-20.6641 + 3.1830I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.58880 - 0.12925I$ $a = -0.470390 - 0.414195I$ $b = -1.052550 - 0.599886I$	$-16.3668 + 6.3822I$	$-20.6641 - 3.1830I$
$u = -1.61264 + 0.16202I$ $a = -1.29225 - 0.74678I$ $b = -0.754602 + 1.160230I$	$-14.5457 + 12.9375I$	$-19.3006 - 6.7062I$
$u = -1.61264 - 0.16202I$ $a = -1.29225 + 0.74678I$ $b = -0.754602 - 1.160230I$	$-14.5457 - 12.9375I$	$-19.3006 + 6.7062I$
$u = -0.309637$ $a = 0.868272$ $b = 0.472677$	-0.638892	-14.7920

II.

$$I_2^u = \langle 2u^{41}+2u^{40}+\cdots-u^2+b,\ -3u^{41}-4u^{40}+\cdots+a+1,\ u^{42}+2u^{41}+\cdots+u+1\rangle$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3+u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^2+1 \\ -u^4+2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 3u^{41}+4u^{40}+\cdots-6u-1 \\ -2u^{41}-2u^{40}+\cdots-6u^3+u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^3-2u \\ u^5-3u^3+u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^7-4u^5+4u^3 \\ u^9-5u^7+7u^5-2u^3+u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{40}-u^{39}+\cdots-5u-1 \\ -3u^{41}-3u^{40}+\cdots-5u^3+2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{41}+2u^{40}+\cdots-6u-1 \\ -2u^{41}-2u^{40}+\cdots-6u^3+u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^{41}-2u^{40}+\cdots-2u^2+u \\ -u^{14}+8u^{12}+\cdots+u^2+2u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 2u^{41}+3u^{40}+\cdots-u+1 \\ u^{41}+u^{40}+\cdots+7u^3-2u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 3u^{40}+3u^{39}+\cdots+18u^2-15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{42} - 12u^{41} + \cdots + 53u + 31$
c_2, c_3, c_5 c_6, c_7, c_8 c_{11}, c_{12}	$u^{42} + 2u^{41} + \cdots + u + 1$
c_4, c_9	$(u^{21} + 2u^{20} + \cdots + 5u + 2)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{42} - 12y^{41} + \cdots + 34825y + 961$
c_2, c_3, c_5 c_6, c_7, c_8 c_{11}, c_{12}	$y^{42} - 48y^{41} + \cdots - 11y + 1$
c_4, c_9	$(y^{21} + 10y^{20} + \cdots - 15y - 4)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.952260+0.275050I$ $a=-0.237674+0.141836I$ $b=\ \ 0.469429+1.026280I$	$-8.66083-3.12379I$	$-18.1716+1.7818I$
$u=-0.952260-0.275050I$ $a=-0.237674-0.141836I$ $b=\ \ 0.469429-1.026280I$	$-8.66083+3.12379I$	$-18.1716-1.7818I$
$u=-0.892649+0.147229I$ $a=\ \ 0.102532-0.122821I$ $b=-0.268462-0.851142I$	$-1.46292-1.33471I$	$-14.9864+4.7477I$
$u=-0.892649-0.147229I$ $a=\ \ 0.102532+0.122821I$ $b=-0.268462+0.851142I$	$-1.46292+1.33471I$	$-14.9864-4.7477I$
$u=\ \ 0.723689+0.540993I$ $a=\ \ 1.26266-1.59018I$ $b=\ \ 0.677487+1.162350I$	$-6.63828-10.29320I$	$-16.6887+8.0442I$
$u=\ \ 0.723689-0.540993I$ $a=\ \ 1.26266+1.59018I$ $b=\ \ 0.677487-1.162350I$	$-6.63828+10.29320I$	$-16.6887-8.0442I$
$u=\ \ 0.622201+0.517014I$ $a=\ \ 1.19658-1.76438I$ $b=\ \ 0.436892+1.122040I$	$2.37193-3.84440I$	$-10.04174+4.38533I$
$u=\ \ 0.622201-0.517014I$ $a=\ \ 1.19658+1.76438I$ $b=\ \ 0.436892-1.122040I$	$2.37193+3.84440I$	$-10.04174-4.38533I$
$u=-0.650081+0.454963I$ $a=-0.175433+0.522705I$ $b=\ \ 0.982337+0.491258I$	$-8.77344+4.23823I$	$-18.3836-4.9951I$
$u=-0.650081-0.454963I$ $a=-0.175433-0.522705I$ $b=\ \ 0.982337-0.491258I$	$-8.77344-4.23823I$	$-18.3836+4.9951I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.452901 + 0.570594I$ $a = -0.88626 + 1.82784I$ $b = -0.052121 - 1.208570I$	$-1.92244 - 1.93968I$	$-12.20153 + 3.66263I$
$u = 0.452901 - 0.570594I$ $a = -0.88626 - 1.82784I$ $b = -0.052121 + 1.208570I$	$-1.92244 + 1.93968I$	$-12.20153 - 3.66263I$
$u = 0.631403 + 0.254962I$ $a = 1.91563 - 2.30921I$ $b = 0.397322 + 0.594617I$	$-10.10480 - 0.64503I$	$-18.1436 + 8.7498I$
$u = 0.631403 - 0.254962I$ $a = 1.91563 + 2.30921I$ $b = 0.397322 - 0.594617I$	$-10.10480 + 0.64503I$	$-18.1436 - 8.7498I$
$u = 0.178370 + 0.653047I$ $a = 0.50210 - 1.62752I$ $b = -0.580700 + 1.149510I$	$-5.02807 + 6.26735I$	$-13.39857 - 3.31929I$
$u = 0.178370 - 0.653047I$ $a = 0.50210 + 1.62752I$ $b = -0.580700 - 1.149510I$	$-5.02807 - 6.26735I$	$-13.39857 + 3.31929I$
$u = 0.543160 + 0.383707I$ $a = -1.24755 + 2.15130I$ $b = -0.268462 - 0.851142I$	$-1.46292 - 1.33471I$	$-14.9864 + 4.7477I$
$u = 0.543160 - 0.383707I$ $a = -1.24755 - 2.15130I$ $b = -0.268462 + 0.851142I$	$-1.46292 + 1.33471I$	$-14.9864 - 4.7477I$
$u = 0.227652 + 0.609745I$ $a = -0.53434 + 1.72086I$ $b = 0.436892 - 1.122040I$	$2.37193 + 3.84440I$	$-10.04174 - 4.38533I$
$u = 0.227652 - 0.609745I$ $a = -0.53434 - 1.72086I$ $b = 0.436892 + 1.122040I$	$2.37193 - 3.84440I$	$-10.04174 + 4.38533I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.409680 + 0.044575I$ $a = -0.180441 - 0.797743I$ $b = -0.052121 + 1.208570I$	$-1.92244 + 1.93968I$	0
$u = -1.409680 - 0.044575I$ $a = -0.180441 + 0.797743I$ $b = -0.052121 - 1.208570I$	$-1.92244 - 1.93968I$	0
$u = -0.226402 + 0.475799I$ $a = -0.056046 - 1.133970I$ $b = -0.885131 + 0.313438I$	$-7.56038 - 0.95789I$	$-15.2596 - 1.5508I$
$u = -0.226402 - 0.475799I$ $a = -0.056046 + 1.133970I$ $b = -0.885131 - 0.313438I$	$-7.56038 + 0.95789I$	$-15.2596 + 1.5508I$
$u = 1.56042 + 0.06421I$ $a = -0.462955 + 0.220565I$ $b = -0.885131 + 0.313438I$	$-7.56038 - 0.95789I$	0
$u = 1.56042 - 0.06421I$ $a = -0.462955 - 0.220565I$ $b = -0.885131 - 0.313438I$	$-7.56038 + 0.95789I$	0
$u = -1.56589 + 0.11035I$ $a = 1.08354 + 1.11273I$ $b = 0.469429 - 1.026280I$	$-8.66083 + 3.12379I$	0
$u = -1.56589 - 0.11035I$ $a = 1.08354 - 1.11273I$ $b = 0.469429 + 1.026280I$	$-8.66083 - 3.12379I$	0
$u = 1.57529 + 0.10471I$ $a = 0.470499 - 0.343906I$ $b = 0.982337 - 0.491258I$	$-8.77344 - 4.23823I$	0
$u = 1.57529 - 0.10471I$ $a = 0.470499 + 0.343906I$ $b = 0.982337 + 0.491258I$	$-8.77344 + 4.23823I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.359452 + 0.212787I$ $a = 0.467612 + 0.591791I$ $b = 0.596034$	-0.606975	$-13.01685 + 0.I$
$u = -0.359452 - 0.212787I$ $a = 0.467612 - 0.591791I$ $b = 0.596034$	-0.606975	$-13.01685 + 0.I$
$u = -1.57630 + 0.14785I$ $a = -1.13809 - 0.86977I$ $b = -0.580700 + 1.149510I$	$-5.02807 + 6.26735I$	0
$u = -1.57630 - 0.14785I$ $a = -1.13809 + 0.86977I$ $b = -0.580700 - 1.149510I$	$-5.02807 - 6.26735I$	0
$u = -1.58753 + 0.08171I$ $a = -1.29868 - 1.37872I$ $b = -0.475070 + 0.853809I$	$-17.7147 + 1.9468I$	0
$u = -1.58753 - 0.08171I$ $a = -1.29868 + 1.37872I$ $b = -0.475070 - 0.853809I$	$-17.7147 - 1.9468I$	0
$u = -1.59635 + 0.15789I$ $a = 1.22706 + 0.79548I$ $b = 0.677487 - 1.162350I$	$-6.63828 + 10.29320I$	0
$u = -1.59635 - 0.15789I$ $a = 1.22706 - 0.79548I$ $b = 0.677487 + 1.162350I$	$-6.63828 - 10.29320I$	0
$u = 1.63726 + 0.03700I$ $a = 0.176213 - 0.298794I$ $b = 0.397322 - 0.594617I$	$-10.10480 + 0.64503I$	0
$u = 1.63726 - 0.03700I$ $a = 0.176213 + 0.298794I$ $b = 0.397322 + 0.594617I$	$-10.10480 - 0.64503I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.66424 + 0.05653I$ $a = -0.186954 + 0.414396I$ $b = -0.475070 + 0.853809I$	$-17.7147 + 1.9468I$	0
$u = 1.66424 - 0.05653I$ $a = -0.186954 - 0.414396I$ $b = -0.475070 - 0.853809I$	$-17.7147 - 1.9468I$	0

III. $I_3^u = \langle b,\ a+1,\ u^2-u-1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -20$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.618034$ $a = -1.00000$ $b = 0$	-1.97392	-20.0000
$u = 1.61803$ $a = -1.00000$ $b = 0$	-17.7653	-20.0000

IV. $I_4^u = \langle b,\ a + u - 2,\ u^2 - u - 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -15$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.618034$ $a = 2.61803$ $b = 0$	-9.86960	-15.0000
$u = 1.61803$ $a = 0.381966$ $b = 0$	-9.86960	-15.0000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$((u^2+u-1)^2)(u^{14}-3u^{13}+\cdots-3u-1)(u^{42}-12u^{41}+\cdots+53u+31)$
c_2, c_3, c_7 c_8	$((u^2+u-1)^2)(u^{14}+u^{13}+\cdots-3u-1)(u^{42}+2u^{41}+\cdots+u+1)$
c_4, c_9	$u^4(u^{14}-5u^{13}+\cdots-8u+4)(u^{21}+2u^{20}+\cdots+5u+2)^2$
c_5, c_6, c_{11} c_{12}	$((u^2-u-1)^2)(u^{14}+u^{13}+\cdots-3u-1)(u^{42}+2u^{41}+\cdots+u+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$((y^2-3y+1)^2)(y^{14}+7y^{13}+\cdots-29y+1)$ $\cdot(y^{42}-12y^{41}+\cdots+34825y+961)$
c_2, c_3, c_5 c_6, c_7, c_8 c_{11}, c_{12}	$((y^2-3y+1)^2)(y^{14}-17y^{13}+\cdots-13y+1)$ $\cdot(y^{42}-48y^{41}+\cdots-11y+1)$
c_4, c_9	$y^4(y^{14}+5y^{13}+\cdots-64y+16)(y^{21}+10y^{20}+\cdots-15y-4)^2$