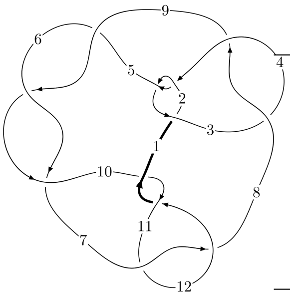
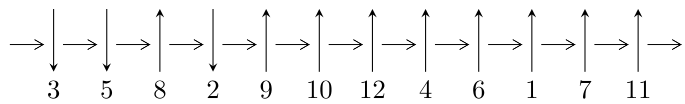
$12a_{0078}$ $(K12a_{0078})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^{81} - u^{80} + \cdots + b - 1,\ u^{81} + u^{80} + \cdots + a + 4u,\ u^{82} + 2u^{81} + \cdots + u + 1 \rangle$$
$$I_2^u = \langle -u^5 + u^3 - u^2 + b - u,\ -u^7 + u^5 - u^4 - u^3 + a - 1,\ u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 90 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.

$$I_1^u = \langle -u^{81} - u^{80} + \cdots + b - 1,\ u^{81} + u^{80} + \cdots + a + 4u,\ u^{82} + 2u^{81} + \cdots + u + 1 \rangle$$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{81} - u^{80} + \cdots + 5u^2 - 4u \\ u^{81} + u^{80} + \cdots + u + 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{14} + 3u^{12} - 6u^{10} + 7u^8 - 6u^6 + 4u^4 - 2u^2 + 1 \\ -u^{14} + 2u^{12} - 3u^{10} + 2u^8 + u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{81} - 2u^{80} + \cdots - 4u - 1 \\ -u^{81} - 2u^{80} + \cdots + 3u^2 - 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{81} + u^{80} + \cdots + 3u + 1 \\ -u^{76} + 14u^{74} + \cdots + 4u^3 - 4u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^4 - u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^9 + 2u^7 - 3u^5 + 2u^3 - u \\ -u^9 + u^7 - u^5 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{19} - 4u^{17} + 10u^{15} - 16u^{13} + 19u^{11} - 18u^9 + 14u^7 - 10u^5 + 5u^3 - 2u \\ u^{19} - 3u^{17} + 6u^{15} - 7u^{13} + 5u^{11} - 3u^9 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 3u^{81} + 2u^{80} + \cdots + 19u + 9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{82} + 35u^{81} + \cdots + 87u + 1$
c_2, c_4	$u^{82} - 9u^{81} + \cdots - 15u + 1$
c_3, c_8	$u^{82} + u^{81} + \cdots - 384u + 256$
c_5, c_6, c_9	$u^{82} - 2u^{81} + \cdots + 231u + 49$
c_7, c_{11}	$u^{82} + 2u^{81} + \cdots + u + 1$
c_{10}, c_{12}	$u^{82} - 30u^{81} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{82} + 33y^{81} + \cdots - 3371y + 1$
c_2, c_4	$y^{82} - 35y^{81} + \cdots - 87y + 1$
c_3, c_8	$y^{82} - 51y^{81} + \cdots - 1949696y + 65536$
c_5, c_6, c_9	$y^{82} - 86y^{81} + \cdots + 637y + 2401$
c_7, c_{11}	$y^{82} - 30y^{81} + \cdots + y + 1$
c_{10}, c_{12}	$y^{82} + 46y^{81} + \cdots + 25y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.742770 + 0.681590I$ $a = 0.244580 + 1.360110I$ $b = -0.293780 + 1.217510I$	$-3.63738 + 0.78744I$	0
$u = -0.742770 - 0.681590I$ $a = 0.244580 - 1.360110I$ $b = -0.293780 - 1.217510I$	$-3.63738 - 0.78744I$	0
$u = -0.983711 + 0.113504I$ $a = 1.135410 + 0.395982I$ $b = 1.160820 + 0.257051I$	$5.61858 - 1.16403I$	0
$u = -0.983711 - 0.113504I$ $a = 1.135410 - 0.395982I$ $b = 1.160820 - 0.257051I$	$5.61858 + 1.16403I$	0
$u = -0.972534 + 0.184730I$ $a = -1.180950 - 0.509477I$ $b = -1.235990 - 0.259714I$	$4.40261 - 6.54773I$	0
$u = -0.972534 - 0.184730I$ $a = -1.180950 + 0.509477I$ $b = -1.235990 + 0.259714I$	$4.40261 + 6.54773I$	0
$u = -0.555615 + 0.812609I$ $a = 0.41623 + 2.64855I$ $b = -2.05957 + 2.46409I$	$6.23213 + 10.42700I$	0
$u = -0.555615 - 0.812609I$ $a = 0.41623 - 2.64855I$ $b = -2.05957 - 2.46409I$	$6.23213 - 10.42700I$	0
$u = 0.673619 + 0.707958I$ $a = -0.84455 + 1.16088I$ $b = 0.674960 + 1.170380I$	$0.191354 - 0.953328I$	0
$u = 0.673619 - 0.707958I$ $a = -0.84455 - 1.16088I$ $b = 0.674960 - 1.170380I$	$0.191354 + 0.953328I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.779687 + 0.667468I$ $a = 0.42764 - 2.37824I$ $b = -2.31222 - 1.69191I$	$-4.10775 + 1.34673I$	0
$u = 0.779687 - 0.667468I$ $a = 0.42764 + 2.37824I$ $b = -2.31222 + 1.69191I$	$-4.10775 - 1.34673I$	0
$u = -0.540301 + 0.807682I$ $a = -0.36241 - 2.48744I$ $b = 2.13262 - 2.27043I$	$8.19364 + 4.30348I$	0
$u = -0.540301 - 0.807682I$ $a = -0.36241 + 2.48744I$ $b = 2.13262 + 2.27043I$	$8.19364 - 4.30348I$	0
$u = -0.825888 + 0.624112I$ $a = -0.354205 - 0.713190I$ $b = -0.024309 - 0.522887I$	$-1.70128 - 2.34818I$	0
$u = -0.825888 - 0.624112I$ $a = -0.354205 + 0.713190I$ $b = -0.024309 + 0.522887I$	$-1.70128 + 2.34818I$	0
$u = 0.722897 + 0.746924I$ $a = 1.37403 - 1.51592I$ $b = -0.61425 - 1.93274I$	$-1.47202 - 5.71308I$	0
$u = 0.722897 - 0.746924I$ $a = 1.37403 + 1.51592I$ $b = -0.61425 + 1.93274I$	$-1.47202 + 5.71308I$	0
$u = 0.540413 + 0.787249I$ $a = -0.992598 - 0.687172I$ $b = -0.759757 + 0.395132I$	$2.76485 - 3.98227I$	0
$u = 0.540413 - 0.787249I$ $a = -0.992598 + 0.687172I$ $b = -0.759757 - 0.395132I$	$2.76485 + 3.98227I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.936730+0.474455I$ $a = 0.714457+0.315117I$ $b = 1.46416-1.29373I$	$2.91414-0.93006I$	0
$u = 0.936730-0.474455I$ $a = 0.714457-0.315117I$ $b = 1.46416+1.29373I$	$2.91414+0.93006I$	0
$u = 0.608329+0.721946I$ $a = -0.607735+0.576661I$ $b = 0.243718+0.648491I$	$0.322998-0.904010I$	$10.47601+0.I$
$u = 0.608329-0.721946I$ $a = -0.607735-0.576661I$ $b = 0.243718-0.648491I$	$0.322998+0.904010I$	$10.47601+0.I$
$u = -0.532481+0.772000I$ $a = -0.21660+2.33589I$ $b = -2.78716+1.94540I$	$1.25959+1.45124I$	$7.57778+0.I$
$u = -0.532481-0.772000I$ $a = -0.21660-2.33589I$ $b = -2.78716-1.94540I$	$1.25959-1.45124I$	$7.57778+0.I$
$u = -0.489775+0.784882I$ $a = -0.27408-1.70120I$ $b = 2.05575-1.44650I$	$8.50290-1.07286I$	$10.21024+0.I$
$u = -0.489775-0.784882I$ $a = -0.27408+1.70120I$ $b = 2.05575+1.44650I$	$8.50290+1.07286I$	$10.21024+0.I$
$u = 0.512685+0.769270I$ $a = 0.731052+0.931298I$ $b = 0.784174-0.176818I$	$2.94847+0.98484I$	$6.99928-2.55231I$
$u = 0.512685-0.769270I$ $a = 0.731052-0.931298I$ $b = 0.784174+0.176818I$	$2.94847-0.98484I$	$6.99928+2.55231I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.08016$ $a=\ \ 0.460931$ $b=\ \ 0.497360$	5.68315	0
$u=-0.891351+0.616034I$ $a=-0.632357-0.558408I$ $b=-0.062681-0.410371I$	$-1.49964-2.51086I$	0
$u=-0.891351-0.616034I$ $a=-0.632357+0.558408I$ $b=-0.062681+0.410371I$	$-1.49964+2.51086I$	0
$u=-0.469791+0.773485I$ $a=\ \ 0.305390+1.361410I$ $b=-1.91125+1.15480I$	$6.75343-7.22433I$	$8.05200+5.28342I$
$u=-0.469791-0.773485I$ $a=\ \ 0.305390-1.361410I$ $b=-1.91125-1.15480I$	$6.75343+7.22433I$	$8.05200-5.28342I$
$u=\ \ 0.963981+0.534698I$ $a=-1.006010-0.207935I$ $b=-1.58881+1.45848I$	$3.33664+4.49587I$	0
$u=\ \ 0.963981-0.534698I$ $a=-1.006010+0.207935I$ $b=-1.58881-1.45848I$	$3.33664-4.49587I$	0
$u=-0.831377+0.727164I$ $a=-0.694470+1.035420I$ $b=-0.983570+0.376220I$	$-3.10733-4.66813I$	0
$u=-0.831377-0.727164I$ $a=-0.694470-1.035420I$ $b=-0.983570-0.376220I$	$-3.10733+4.66813I$	0
$u=\ \ 0.869045+0.089866I$ $a=-0.106416+0.510526I$ $b=\ \ 0.181534-0.847373I$	$1.05325+1.74872I$	$11.28230-4.54859I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.869045 - 0.089866I$ $a = -0.106416 - 0.510526I$ $b = 0.181534 + 0.847373I$	$1.05325 - 1.74872I$	$11.28230 + 4.54859I$
$u = 0.914722 + 0.658273I$ $a = 2.36183 - 0.57009I$ $b = 1.43535 - 3.27787I$	$-3.69309 + 3.79631I$	0
$u = 0.914722 - 0.658273I$ $a = 2.36183 + 0.57009I$ $b = 1.43535 + 3.27787I$	$-3.69309 - 3.79631I$	0
$u = 1.13174$ $a = -2.77777$ $b = -0.171583$	6.95973	0
$u = -0.879897 + 0.717160I$ $a = 1.072790 - 0.475215I$ $b = 0.915535 + 0.286937I$	$-2.95968 - 0.83056I$	0
$u = -0.879897 - 0.717160I$ $a = 1.072790 + 0.475215I$ $b = 0.915535 - 0.286937I$	$-2.95968 + 0.83056I$	0
$u = -1.136470 + 0.010119I$ $a = 0.107222 + 0.732042I$ $b = 0.127712 + 0.826867I$	$8.58956 - 2.55565I$	0
$u = -1.136470 - 0.010119I$ $a = 0.107222 - 0.732042I$ $b = 0.127712 - 0.826867I$	$8.58956 + 2.55565I$	0
$u = 1.146400 + 0.030933I$ $a = -2.25094 + 0.29979I$ $b = -0.481995 - 0.450536I$	$12.2980 + 9.0487I$	0
$u = 1.146400 - 0.030933I$ $a = -2.25094 - 0.29979I$ $b = -0.481995 + 0.450536I$	$12.2980 - 9.0487I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.149210 + 0.018459I$ $a = 2.36564 - 0.19446I$ $b = 0.488971 + 0.274865I$	$14.1727 + 2.8208I$	0
$u = 1.149210 - 0.018459I$ $a = 2.36564 + 0.19446I$ $b = 0.488971 - 0.274865I$	$14.1727 - 2.8208I$	0
$u = -0.938888 + 0.666226I$ $a = 1.169250 + 0.543123I$ $b = 0.099267 + 0.943058I$	$-3.04447 - 6.00273I$	0
$u = -0.938888 - 0.666226I$ $a = 1.169250 - 0.543123I$ $b = 0.099267 - 0.943058I$	$-3.04447 + 6.00273I$	0
$u = 0.974939 + 0.669400I$ $a = -1.18700 + 0.86217I$ $b = -0.31958 + 2.22104I$	$1.07667 + 6.24979I$	0
$u = 0.974939 - 0.669400I$ $a = -1.18700 - 0.86217I$ $b = -0.31958 - 2.22104I$	$1.07667 - 6.24979I$	0
$u = 0.963754 + 0.699919I$ $a = 1.32913 - 1.40918I$ $b = -0.10864 - 2.78263I$	$-0.74834 + 11.21750I$	0
$u = 0.963754 - 0.699919I$ $a = 1.32913 + 1.40918I$ $b = -0.10864 + 2.78263I$	$-0.74834 - 11.21750I$	0
$u = -0.794366$ $a = -1.92015$ $b = -1.54546$	-0.199376	16.2640
$u = 1.021690 + 0.661610I$ $a = -0.354244 + 0.502031I$ $b = 0.100352 + 0.975761I$	$1.54134 + 6.23006I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.021690 - 0.661610I$ $a = -0.354244 - 0.502031I$ $b = 0.100352 - 0.975761I$	$1.54134 - 6.23006I$	0
$u = -1.066280 + 0.628903I$ $a = 1.342030 - 0.354279I$ $b = 1.54130 + 2.68662I$	$8.48924 + 1.95535I$	0
$u = -1.066280 - 0.628903I$ $a = 1.342030 + 0.354279I$ $b = 1.54130 - 2.68662I$	$8.48924 - 1.95535I$	0
$u = 1.057180 + 0.645866I$ $a = -0.744289 - 0.464674I$ $b = -1.45280 + 0.13979I$	$4.53494 + 4.36156I$	0
$u = 1.057180 - 0.645866I$ $a = -0.744289 + 0.464674I$ $b = -1.45280 - 0.13979I$	$4.53494 - 4.36156I$	0
$u = -1.054170 + 0.653560I$ $a = 2.57977 - 0.47238I$ $b = 2.22655 + 3.81336I$	$2.78674 - 6.84253I$	0
$u = -1.054170 - 0.653560I$ $a = 2.57977 + 0.47238I$ $b = 2.22655 - 3.81336I$	$2.78674 + 6.84253I$	0
$u = -1.067760 + 0.639442I$ $a = -1.68971 + 0.24602I$ $b = -1.64820 - 3.06661I$	$10.19720 - 4.27807I$	0
$u = -1.067760 - 0.639442I$ $a = -1.68971 - 0.24602I$ $b = -1.64820 + 3.06661I$	$10.19720 + 4.27807I$	0
$u = 1.057590 + 0.659971I$ $a = 0.615096 + 0.674075I$ $b = 1.45428 + 0.26538I$	$4.29069 + 9.43826I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.057590 - 0.659971I$ $a = 0.615096 - 0.674075I$ $b = 1.45428 - 0.26538I$	$4.29069 - 9.43826I$	0
$u = -1.065160 + 0.665399I$ $a = -2.46286 - 0.25088I$ $b = -1.53551 - 3.87903I$	$9.75434 - 9.83173I$	0
$u = -1.065160 - 0.665399I$ $a = -2.46286 + 0.25088I$ $b = -1.53551 + 3.87903I$	$9.75434 + 9.83173I$	0
$u = -1.062690 + 0.672745I$ $a = 2.60161 + 0.42830I$ $b = 1.41154 + 3.99113I$	$7.7452 - 15.9995I$	0
$u = -1.062690 - 0.672745I$ $a = 2.60161 - 0.42830I$ $b = 1.41154 - 3.99113I$	$7.7452 + 15.9995I$	0
$u = 0.296289 + 0.524344I$ $a = -0.50945 + 1.36283I$ $b = 0.648894 + 0.183040I$	$1.79627 - 0.48586I$	$8.09606 - 0.14290I$
$u = 0.296289 - 0.524344I$ $a = -0.50945 - 1.36283I$ $b = 0.648894 - 0.183040I$	$1.79627 + 0.48586I$	$8.09606 + 0.14290I$
$u = 0.160959 + 0.532274I$ $a = 0.73342 - 1.50239I$ $b = -0.576401 - 0.234087I$	$1.01882 + 4.40596I$	$5.40774 - 5.91692I$
$u = 0.160959 - 0.532274I$ $a = 0.73342 + 1.50239I$ $b = -0.576401 + 0.234087I$	$1.01882 - 4.40596I$	$5.40774 + 5.91692I$
$u = 0.498541$ $a = -0.505794$ $b = 0.337787$	0.680463	14.8240

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.121084 + 0.275781I$ $a = 0.71570 - 1.87090I$ $b = -0.450058 - 0.371328I$	$-1.65227 - 0.65424I$	$-2.63477 + 1.82437I$
$u = -0.121084 - 0.275781I$ $a = 0.71570 + 1.87090I$ $b = -0.450058 + 0.371328I$	$-1.65227 + 0.65424I$	$-2.63477 - 1.82437I$

II. $\boldsymbol{I_2^u = \langle -u^5 + u^3 - u^2 + b - u,\ -u^7 + u^5 - u^4 - u^3 + a - 1,\ u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 2u^7 + u^6 - 5u^5 + 5u^3 - u^2 - 4u + 5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^8$
c_3, c_8	y^8
c_5, c_6, c_9	$y^8 - 7y^7 + 19y^6 - 22y^5 + 3y^4 + 14y^3 - 6y^2 - 4y + 1$
c_7, c_{11}	$y^8 - 3y^7 + 7y^6 - 10y^5 + 11y^4 - 10y^3 + 6y^2 - 4y + 1$
c_{10}, c_{12}	$y^8 + 5y^7 + 11y^6 + 6y^5 - 17y^4 - 34y^3 - 22y^2 - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.570868 + 0.730671I$ $a = 0.325934 + 0.693334I$ $b = 0.972127 + 0.565636I$	$-0.604279 - 1.131230I$	$1.47926 + 0.84929I$
$u = 0.570868 - 0.730671I$ $a = 0.325934 - 0.693334I$ $b = 0.972127 - 0.565636I$	$-0.604279 + 1.131230I$	$1.47926 - 0.84929I$
$u = -0.855237 + 0.665892I$ $a = -1.03462 - 0.99451I$ $b = 0.39611 - 1.88650I$	$-3.80435 - 2.57849I$	$2.50535 + 3.23297I$
$u = -0.855237 - 0.665892I$ $a = -1.03462 + 0.99451I$ $b = 0.39611 + 1.88650I$	$-3.80435 + 2.57849I$	$2.50535 - 3.23297I$
$u = -1.09818$ $a = 0.801005$ $b = -0.165005$	4.85780	7.45240
$u = 1.031810 + 0.655470I$ $a = -0.842429 - 0.289836I$ $b = -0.699541 + 1.033710I$	$0.73474 + 6.44354I$	$3.27544 - 5.90525I$
$u = 1.031810 - 0.655470I$ $a = -0.842429 + 0.289836I$ $b = -0.699541 - 1.033710I$	$0.73474 - 6.44354I$	$3.27544 + 5.90525I$
$u = 0.603304$ $a = 1.30123$ $b = 0.827616$	-0.799899	3.02750

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^8)(u^{82}+35u^{81}+\cdots+87u+1)$
c_2	$((u-1)^8)(u^{82}-9u^{81}+\cdots-15u+1)$
c_3, c_8	$u^8(u^{82}+u^{81}+\cdots-384u+256)$
c_4	$((u+1)^8)(u^{82}-9u^{81}+\cdots-15u+1)$
c_5, c_6	$(u^8-u^7-3u^6+2u^5+3u^4-2u-1)(u^{82}-2u^{81}+\cdots+231u+49)$
c_7	$(u^8+u^7+\cdots-2u-1)(u^{82}+2u^{81}+\cdots+u+1)$
c_9	$(u^8+u^7-3u^6-2u^5+3u^4+2u-1)(u^{82}-2u^{81}+\cdots+231u+49)$
c_{10}	$(u^8+3u^7+7u^6+10u^5+11u^4+10u^3+6u^2+4u+1)$ $\cdot(u^{82}-30u^{81}+\cdots+u+1)$
c_{11}	$(u^8-u^7+\cdots+2u-1)(u^{82}+2u^{81}+\cdots+u+1)$
c_{12}	$(u^8-3u^7+7u^6-10u^5+11u^4-10u^3+6u^2-4u+1)$ $\cdot(u^{82}-30u^{81}+\cdots+u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^8)(y^{82}+33y^{81}+\cdots-3371y+1)$
c_2, c_4	$((y-1)^8)(y^{82}-35y^{81}+\cdots-87y+1)$
c_3, c_8	$y^8(y^{82}-51y^{81}+\cdots-1949696y+65536)$
c_5, c_6, c_9	$(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot(y^{82}-86y^{81}+\cdots+637y+2401)$
c_7, c_{11}	$(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot(y^{82}-30y^{81}+\cdots+y+1)$
c_{10}, c_{12}	$(y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1)$ $\cdot(y^{82}+46y^{81}+\cdots+25y+1)$