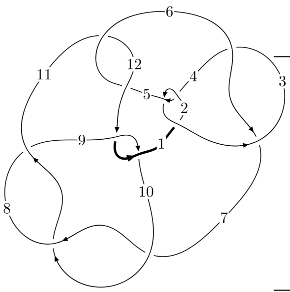
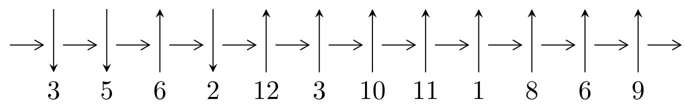
$12n_{0135}$ ($K12n_{0135}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 7.50785 \times 10^{65} u^{51} + 7.16783 \times 10^{66} u^{50} + \cdots + 7.42713 \times 10^{65} b + 1.96991 \times 10^{66},$$
$$5.02177 \times 10^{66} u^{51} + 4.81887 \times 10^{67} u^{50} + \cdots + 1.48543 \times 10^{66} a + 4.88267 \times 10^{67},\ u^{52} + 10u^{51} + \cdots + 42u +$$
$$I_2^u = \langle 3a^7 - a^6 - 4a^5 + 3a^4 + 6a^3 - 2a^2 + b - 3a + 4,\ a^8 - a^7 - a^6 + 2a^5 + a^4 - 2a^3 + 2a - 1,\ u - 1\rangle$$
$$I_3^u = \langle -u^4 - u^3 + u^2 + b + 2u + 1,\ u^5 + u^4 - u^3 - u^2 + a + u + 1,\ u^6 + u^5 - u^4 - 2u^3 + u + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 66 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. $\boldsymbol{I_1^u =}$
$\boldsymbol{\langle 7.51\times10^{65}u^{51}+7.17\times10^{66}u^{50}+\cdots+7.43\times10^{65}b+1.97\times10^{66},\ 5.02\times10^{66}u^{51}+ 4.82\times10^{67}u^{50}+\cdots+1.49\times10^{66}a+4.88\times10^{67},\ u^{52}+10u^{51}+\cdots+42u+1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^2+1\\-u^2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-3.38070u^{51}-32.4410u^{50}+\cdots-334.790u-32.8705\\-1.01087u^{51}-9.65087u^{50}+\cdots-83.4897u-2.65231\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-4.55808u^{51}-43.5756u^{50}+\cdots-423.069u-35.6566\\-0.649601u^{51}-6.17332u^{50}+\cdots-52.5054u-1.87796\end{pmatrix}$$
$$a_4 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-0.0984110u^{51}-0.192798u^{50}+\cdots+107.102u+18.1612\\-0.0523888u^{51}-0.301105u^{50}+\cdots+24.7289u+0.984872\end{pmatrix}$$
$$a_6 = \begin{pmatrix}1.75053u^{51}+16.1107u^{50}+\cdots+66.9644u-4.72365\\0.445418u^{51}+4.10330u^{50}+\cdots+21.4257u+0.355988\end{pmatrix}$$
$$a_7 = \begin{pmatrix}2.19594u^{51}+20.2140u^{50}+\cdots+88.3901u-4.36766\\0.445418u^{51}+4.10330u^{50}+\cdots+21.4257u+0.355988\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-0.520552u^{51}-4.34536u^{50}+\cdots+41.7074u+19.0709\\-0.0705558u^{51}-0.589302u^{50}+\cdots+8.55893u+0.631584\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.281350u^{51}+1.78079u^{50}+\cdots-103.579u-19.6506\\-0.196558u^{51}-1.93868u^{50}+\cdots-21.7903u-0.947282\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.397552u^{51}-3.22353u^{50}+\cdots+24.0213u+12.7608$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{52} + 14u^{51} + \cdots + 1402u + 1$
c_2, c_4	$u^{52} - 10u^{51} + \cdots - 42u + 1$
c_3, c_6	$u^{52} + 6u^{51} + \cdots - 384u + 256$
c_5, c_{11}	$u^{52} + 3u^{51} + \cdots + 2u + 1$
c_7, c_8, c_{10}	$u^{52} + 8u^{51} + \cdots + 5u + 1$
c_9, c_{12}	$u^{52} - 2u^{51} + \cdots - 192u + 64$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} + 58y^{51} + \cdots - 1883250y + 1$
c_2, c_4	$y^{52} - 14y^{51} + \cdots - 1402y + 1$
c_3, c_6	$y^{52} - 54y^{51} + \cdots - 6144000y + 65536$
c_5, c_{11}	$y^{52} + 11y^{51} + \cdots - 2y + 1$
c_7, c_8, c_{10}	$y^{52} - 56y^{51} + \cdots - 11y + 1$
c_9, c_{12}	$y^{52} - 42y^{51} + \cdots + 4096y + 4096$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.936589 + 0.362367I$ $a = -0.132979 + 0.482589I$ $b = 0.197306 + 0.774360I$	$-1.82480 - 1.05655I$	$-2.50386 + 1.55405I$
$u = 0.936589 - 0.362367I$ $a = -0.132979 - 0.482589I$ $b = 0.197306 - 0.774360I$	$-1.82480 + 1.05655I$	$-2.50386 - 1.55405I$
$u = 1.01183$ $a = -0.483216$ $b = 5.14944$	-0.760272	181.970
$u = -0.559950 + 0.773669I$ $a = -0.737013 + 0.263694I$ $b = -0.240844 + 0.206423I$	$2.51889 - 0.64898I$	$4.15765 - 0.18218I$
$u = -0.559950 - 0.773669I$ $a = -0.737013 - 0.263694I$ $b = -0.240844 - 0.206423I$	$2.51889 + 0.64898I$	$4.15765 + 0.18218I$
$u = 0.559290 + 0.772342I$ $a = -1.39670 + 1.62328I$ $b = 0.48402 + 1.50336I$	$0.23912 - 3.31860I$	$6.89920 + 8.86972I$
$u = 0.559290 - 0.772342I$ $a = -1.39670 - 1.62328I$ $b = 0.48402 - 1.50336I$	$0.23912 + 3.31860I$	$6.89920 - 8.86972I$
$u = 1.048670 + 0.109728I$ $a = -1.11061 - 1.03411I$ $b = -4.91550 + 0.99875I$	$-0.279878 - 0.575640I$	$9.6300 - 22.9731I$
$u = 1.048670 - 0.109728I$ $a = -1.11061 + 1.03411I$ $b = -4.91550 - 0.99875I$	$-0.279878 + 0.575640I$	$9.6300 + 22.9731I$
$u = -0.885811 + 0.275583I$ $a = -0.543684 - 0.920606I$ $b = -0.464994 - 0.146107I$	$0.98837 + 7.05447I$	$10.8678 - 11.9178I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.885811 - 0.275583I$ $a = -0.543684 + 0.920606I$ $b = -0.464994 + 0.146107I$	$0.98837 - 7.05447I$	$10.8678 + 11.9178I$
$u = 0.591648 + 0.563249I$ $a = -1.253030 + 0.325457I$ $b = 0.97832 + 1.31538I$	$8.16733 - 1.74753I$	$11.46085 - 2.28011I$
$u = 0.591648 - 0.563249I$ $a = -1.253030 - 0.325457I$ $b = 0.97832 - 1.31538I$	$8.16733 + 1.74753I$	$11.46085 + 2.28011I$
$u = 1.20718$ $a = 0.627019$ $b = -1.27287$	6.40671	22.8380
$u = -1.038340 + 0.632822I$ $a = 0.235533 - 0.357978I$ $b = -0.020097 - 0.228430I$	$1.02907 + 5.96168I$	0
$u = -1.038340 - 0.632822I$ $a = 0.235533 + 0.357978I$ $b = -0.020097 + 0.228430I$	$1.02907 - 5.96168I$	0
$u = 1.267370 + 0.221888I$ $a = 0.809757 + 0.387823I$ $b = 1.55628 + 0.73822I$	$-2.35126 - 1.18530I$	0
$u = 1.267370 - 0.221888I$ $a = 0.809757 - 0.387823I$ $b = 1.55628 - 0.73822I$	$-2.35126 + 1.18530I$	0
$u = -0.786110 + 1.048790I$ $a = -0.21713 - 1.56663I$ $b = 0.70420 - 1.92030I$	$14.7382 - 0.7846I$	0
$u = -0.786110 - 1.048790I$ $a = -0.21713 + 1.56663I$ $b = 0.70420 + 1.92030I$	$14.7382 + 0.7846I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.682528$ $a=\ \ 1.55752$ $b=\ \ 0.428312$	5.57235	20.0660
$u=-0.930489+0.946751I$ $a=\ \ 1.69913+0.93383I$ $b=\ \ 0.39846+1.91824I$	$6.81089+3.11557I$	0
$u=-0.930489-0.946751I$ $a=\ \ 1.69913-0.93383I$ $b=\ \ 0.39846-1.91824I$	$6.81089-3.11557I$	0
$u=-0.638336+0.175622I$ $a=\ \ 0.52839+1.50233I$ $b=\ \ 0.636738+0.330921I$	$-3.01505+2.93991I$	$8.02854-4.94099I$
$u=-0.638336-0.175622I$ $a=\ \ 0.52839-1.50233I$ $b=\ \ 0.636738-0.330921I$	$-3.01505-2.93991I$	$8.02854+4.94099I$
$u=-0.770546+1.105190I$ $a=-1.71258-1.50608I$ $b=-0.37064-2.04621I$	$7.28875-2.86108I$	0
$u=-0.770546-1.105190I$ $a=-1.71258+1.50608I$ $b=-0.37064+2.04621I$	$7.28875+2.86108I$	0
$u=-0.989587+0.918401I$ $a=\ \ 0.45156+1.89777I$ $b=-0.78553+2.38078I$	$6.62010+3.75962I$	0
$u=-0.989587-0.918401I$ $a=\ \ 0.45156-1.89777I$ $b=-0.78553-2.38078I$	$6.62010-3.75962I$	0
$u=-0.875232+1.046570I$ $a=\ \ 1.123190-0.374810I$ $b=\ \ 0.481797-0.298623I$	$9.30042+0.19617I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.875232 - 1.046570I$ $a = 1.123190 + 0.374810I$ $b = 0.481797 + 0.298623I$	$9.30042 - 0.19617I$	0
$u = 0.331898 + 0.536708I$ $a = 1.10257 - 1.85668I$ $b = -0.014867 - 1.287660I$	$2.07038 - 1.52953I$	$7.08674 + 4.40429I$
$u = 0.331898 - 0.536708I$ $a = 1.10257 + 1.85668I$ $b = -0.014867 + 1.287660I$	$2.07038 + 1.52953I$	$7.08674 - 4.40429I$
$u = -1.07831 + 0.92955I$ $a = -0.621833 + 0.528081I$ $b = -0.098379 + 0.481486I$	$8.63174 + 7.01563I$	0
$u = -1.07831 - 0.92955I$ $a = -0.621833 - 0.528081I$ $b = -0.098379 - 0.481486I$	$8.63174 - 7.01563I$	0
$u = -1.12261 + 0.87557I$ $a = -1.29753 - 0.66665I$ $b = -0.29203 - 1.83559I$	$13.6500 + 7.8231I$	0
$u = -1.12261 - 0.87557I$ $a = -1.29753 + 0.66665I$ $b = -0.29203 + 1.83559I$	$13.6500 - 7.8231I$	0
$u = 0.67896 + 1.25719I$ $a = 1.47889 - 1.24770I$ $b = 0.27488 - 1.48136I$	$7.15465 - 5.75608I$	0
$u = 0.67896 - 1.25719I$ $a = 1.47889 + 1.24770I$ $b = 0.27488 + 1.48136I$	$7.15465 + 5.75608I$	0
$u = -1.14863 + 0.89049I$ $a = -0.81470 - 1.85316I$ $b = 0.45931 - 2.66963I$	$6.05959 + 10.09710I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.14863 - 0.89049I$ $a = -0.81470 + 1.85316I$ $b = 0.45931 + 2.66963I$	$6.05959 - 10.09710I$	0
$u = -0.69380 + 1.36099I$ $a = 1.30611 + 1.75718I$ $b = 0.30103 + 2.05635I$	$15.0358 - 7.1240I$	0
$u = -0.69380 - 1.36099I$ $a = 1.30611 - 1.75718I$ $b = 0.30103 - 2.05635I$	$15.0358 + 7.1240I$	0
$u = -0.419666 + 0.131585I$ $a = -1.25630 + 1.76003I$ $b = -0.824846 + 0.597324I$	$0.61020 + 1.37415I$	$10.26914 - 1.41740I$
$u = -0.419666 - 0.131585I$ $a = -1.25630 - 1.76003I$ $b = -0.824846 - 0.597324I$	$0.61020 - 1.37415I$	$10.26914 + 1.41740I$
$u = -1.28851 + 0.90075I$ $a = 0.95078 + 1.61316I$ $b = -0.13690 + 2.61915I$	$13.0011 + 15.0944I$	0
$u = -1.28851 - 0.90075I$ $a = 0.95078 - 1.61316I$ $b = -0.13690 - 2.61915I$	$13.0011 - 15.0944I$	0
$u = 0.413751 + 0.078624I$ $a = 2.08417 - 1.70106I$ $b = -1.50990 + 0.03857I$	$0.524938 + 0.113527I$	$8.64384 - 0.42173I$
$u = 0.413751 - 0.078624I$ $a = 2.08417 + 1.70106I$ $b = -1.50990 - 0.03857I$	$0.524938 - 0.113527I$	$8.64384 + 0.42173I$
$u = 1.64301 + 0.52942I$ $a = -0.919697 - 0.977859I$ $b = -1.16522 - 1.43890I$	$3.67025 - 2.14792I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 1.64301 - 0.52942I$ $a = -0.919697 + 0.977859I$ $b = -1.16522 + 1.43890I$	$3.67025 + 2.14792I$	0
$u = -0.0269946$ $a = -24.2139$ $b = -0.570054$	0.823260	12.0980

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -36a^7 + 15a^6 + 42a^5 - 45a^4 - 62a^3 + 34a^2 + 20a - 57$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0.570868 + 0.730671I$ $b = 1.80990 - 0.33963I$	$-0.604279 - 1.131230I$	$2.08624 + 1.57496I$
$u = 1.00000$ $a = 0.570868 - 0.730671I$ $b = 1.80990 + 0.33963I$	$-0.604279 + 1.131230I$	$2.08624 - 1.57496I$
$u = 1.00000$ $a = -0.855237 + 0.665892I$ $b = -1.043770 + 0.152194I$	$-3.80435 - 2.57849I$	$-1.05479 + 2.41352I$
$u = 1.00000$ $a = -0.855237 - 0.665892I$ $b = -1.043770 - 0.152194I$	$-3.80435 + 2.57849I$	$-1.05479 - 2.41352I$
$u = 1.00000$ $a = -1.09818$ $b = -0.155540$	4.85780	7.27590
$u = 1.00000$ $a = 1.031810 + 0.655470I$ $b = 0.759875 + 0.104398I$	$0.73474 + 6.44354I$	$6.38151 - 0.59069I$
$u = 1.00000$ $a = 1.031810 - 0.655470I$ $b = 0.759875 - 0.104398I$	$0.73474 - 6.44354I$	$6.38151 + 0.59069I$
$u = 1.00000$ $a = 0.603304$ $b = -2.89645$	-0.799899	-49.1020

III. $\boldsymbol{I^u_3 =}$
$\boldsymbol{\langle -u^4-u^3+u^2+b+2u+1,\ u^5+u^4-u^3-u^2+a+u+1,\ u^6+u^5-u^4-2u^3+u+1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3u^5+7u^4+u^3-6u^2-5u+11$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = -1.00126 - 1.15863I$ $b = -2.68739 + 0.76772I$	$-0.245672 - 0.924305I$	$5.17126 + 7.13914I$
$u = 1.002190 - 0.295542I$ $a = -1.00126 + 1.15863I$ $b = -2.68739 - 0.76772I$	$-0.245672 + 0.924305I$	$5.17126 - 7.13914I$
$u = -0.428243 + 0.664531I$ $a = 0.001257 - 1.158630I$ $b = 0.346225 - 0.393823I$	$3.53554 - 0.92430I$	$13.12292 + 1.33143I$
$u = -0.428243 - 0.664531I$ $a = 0.001257 + 1.158630I$ $b = 0.346225 + 0.393823I$	$3.53554 + 0.92430I$	$13.12292 - 1.33143I$
$u = -1.073950 + 0.558752I$ $a = -0.500000 + 0.260139I$ $b = -0.658836 - 0.177500I$	$1.64493 + 5.69302I$	$11.70582 - 2.69056I$
$u = -1.073950 - 0.558752I$ $a = -0.500000 - 0.260139I$ $b = -0.658836 + 0.177500I$	$1.64493 - 5.69302I$	$11.70582 + 2.69056I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^8(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^{52}+14u^{51}+\cdots+1402u+1)$
c_2	$((u-1)^8)(u^6+u^5+\cdots+u+1)(u^{52}-10u^{51}+\cdots-42u+1)$
c_3	$u^8(u^6-u^5+\cdots-u+1)(u^{52}+6u^{51}+\cdots-384u+256)$
c_4	$((u+1)^8)(u^6-u^5+\cdots-u+1)(u^{52}-10u^{51}+\cdots-42u+1)$
c_5	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^8+3u^7+7u^6+10u^5+11u^4+10u^3+6u^2+4u+1)$ $\cdot(u^{52}+3u^{51}+\cdots+2u+1)$
c_6	$u^8(u^6+u^5+\cdots+u+1)(u^{52}+6u^{51}+\cdots-384u+256)$
c_7, c_8	$((u+1)^6)(u^8-u^7+\cdots-2u-1)(u^{52}+8u^{51}+\cdots+5u+1)$
c_9	$u^6(u^8+u^7+\cdots-2u-1)(u^{52}-2u^{51}+\cdots-192u+64)$
c_{10}	$((u-1)^6)(u^8+u^7+\cdots+2u-1)(u^{52}+8u^{51}+\cdots+5u+1)$
c_{11}	$(u^6+3u^5+5u^4+4u^3+2u^2+u+1)$ $\cdot(u^8-3u^7+7u^6-10u^5+11u^4-10u^3+6u^2-4u+1)$ $\cdot(u^{52}+3u^{51}+\cdots+2u+1)$
c_{12}	$u^6(u^8-u^7+\cdots+2u-1)(u^{52}-2u^{51}+\cdots-192u+64)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^8(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot\,(y^{52}+58y^{51}+\cdots-1883250y+1)$
c_2, c_4	$(y-1)^8(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot\,(y^{52}-14y^{51}+\cdots-1402y+1)$
c_3, c_6	$y^8(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot\,(y^{52}-54y^{51}+\cdots-6144000y+65536)$
c_5, c_{11}	$(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot\,(y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1)$ $\cdot\,(y^{52}+11y^{51}+\cdots-2y+1)$
c_7, c_8, c_{10}	$(y-1)^6(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot\,(y^{52}-56y^{51}+\cdots-11y+1)$
c_9, c_{12}	$y^6(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot\,(y^{52}-42y^{51}+\cdots+4096y+4096)$