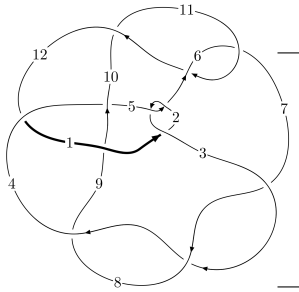
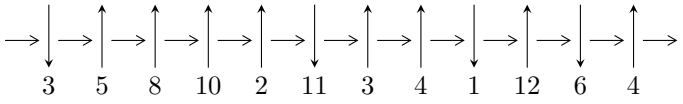
$12n_{0350}$ $(K12n_{0350})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -5.29491 \times 10^{120} u^{72} - 5.67691 \times 10^{120} u^{71} + \cdots + 2.16404 \times 10^{120} b + 3.26172 \times 10^{122},$$
$$- 1.13483 \times 10^{122} u^{72} - 2.62988 \times 10^{122} u^{71} + \cdots + 3.09458 \times 10^{122} a - 3.19287 \times 10^{124},$$
$$u^{73} + u^{72} + \cdots - 54u + 143 \rangle$$
$$I_2^u = \langle u^{21} + 2u^{20} + \cdots + b + 2,\ -6u^{21} - 7u^{20} + \cdots + a + 7,\ u^{22} + 2u^{21} + \cdots + 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 95 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. $\boldsymbol{I_1^u = \langle -5.29 \times 10^{120} u^{72} - 5.68 \times 10^{120} u^{71} + \cdots + 2.16 \times 10^{120} b + 3.26 \times 10^{122},\ -1.13 \times 10^{122} u^{72} - 2.63 \times 10^{122} u^{71} + \cdots + 3.09 \times 10^{122} a - 3.19 \times 10^{124},\ u^{73} + u^{72} + \cdots - 54u + 143 \rangle}$

(i) Arc colorings

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

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

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

$$a_6 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0.366715u^{72} + 0.849834u^{71} + \cdots + 93.7582u + 103.176 \\ 2.44677u^{72} + 2.62329u^{71} + \cdots + 404.194u - 150.723 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0790626u^{72} - 0.0854014u^{71} + \cdots - 11.2736u - 52.6707 \\ -0.461261u^{72} + 0.201291u^{71} + \cdots - 91.3359u + 152.246 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.103382u^{72} + 0.154811u^{71} + \cdots + 68.5103u + 78.0723 \\ 1.59212u^{72} + 1.90881u^{71} + \cdots + 288.755u - 68.9470 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.555398u^{72} - 1.64164u^{71} + \cdots - 56.7111u - 118.525 \\ 0.235819u^{72} + 0.648309u^{71} + \cdots + 33.9399u + 52.7633 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.420761u^{72} - 0.753968u^{71} + \cdots - 88.3251u + 21.7494 \\ 0.826324u^{72} + 0.838782u^{71} + \cdots + 168.780u - 9.30641 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.42862u^{72} - 1.96581u^{71} + \cdots - 265.577u + 38.5749 \\ 0.600156u^{72} + 0.832821u^{71} + \cdots + 124.638u + 36.6878 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.791216u^{72} + 2.28995u^{71} + \cdots + 90.6511u + 171.289 \\ -0.235819u^{72} - 0.648309u^{71} + \cdots - 33.9399u - 52.7633 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.47879u^{72} - 1.95242u^{71} + \cdots - 309.552u + 200.317$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{73} + 43u^{72} + \cdots - 318262u - 20449$
c_2, c_5	$u^{73} - u^{72} + \cdots - 54u - 143$
c_3, c_7, c_8	$u^{73} + u^{72} + \cdots - 18u - 1$
c_4	$u^{73} - u^{72} + \cdots - 26u - 3$
c_6, c_{11}	$u^{73} + u^{72} + \cdots + 280u - 119$
c_9	$u^{73} - 5u^{72} + \cdots + 22u - 1$
c_{10}	$u^{73} - 25u^{72} + \cdots - 219576u + 14161$
c_{12}	$u^{73} + 5u^{72} + \cdots - 14u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{73} - 13y^{72} + \cdots + 6813662274y - 418161601$
c_2, c_5	$y^{73} + 43y^{72} + \cdots - 318262y - 20449$
c_3, c_7, c_8	$y^{73} - 19y^{72} + \cdots + 78y - 1$
c_4	$y^{73} - 9y^{72} + \cdots - 140y - 9$
c_6, c_{11}	$y^{73} + 25y^{72} + \cdots - 219576y - 14161$
c_9	$y^{73} - 71y^{72} + \cdots + 74y - 1$
c_{10}	$y^{73} + 45y^{72} + \cdots + 7780282916y - 200533921$
c_{12}	$y^{73} + 65y^{72} + \cdots - 124y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.683574 + 0.741540I$ $a = 1.24911 - 0.93513I$ $b = 1.63585 + 0.41682I$	$6.62976 + 3.45446I$	$12.33941 + 0.I$
$u = 0.683574 - 0.741540I$ $a = 1.24911 + 0.93513I$ $b = 1.63585 - 0.41682I$	$6.62976 - 3.45446I$	$12.33941 + 0.I$
$u = -0.986818 + 0.037483I$ $a = 1.21894 - 0.96902I$ $b = 1.38473 - 0.39776I$	$-3.56549 - 3.25751I$	$4.00000 + 2.71745I$
$u = -0.986818 - 0.037483I$ $a = 1.21894 + 0.96902I$ $b = 1.38473 + 0.39776I$	$-3.56549 + 3.25751I$	$4.00000 - 2.71745I$
$u = -0.535723 + 0.826575I$ $a = 0.676203 + 0.430293I$ $b = 0.919141 - 0.126022I$	$1.71374 - 1.35709I$	$6.26252 + 3.77195I$
$u = -0.535723 - 0.826575I$ $a = 0.676203 - 0.430293I$ $b = 0.919141 + 0.126022I$	$1.71374 + 1.35709I$	$6.26252 - 3.77195I$
$u = 0.249076 + 0.988123I$ $a = 0.963692 - 0.195170I$ $b = 1.215860 - 0.565099I$	$-0.10064 + 5.52882I$	$4.00000 - 5.78158I$
$u = 0.249076 - 0.988123I$ $a = 0.963692 + 0.195170I$ $b = 1.215860 + 0.565099I$	$-0.10064 - 5.52882I$	$4.00000 + 5.78158I$
$u = -0.171086 + 1.013120I$ $a = -1.240710 + 0.320252I$ $b = 0.183330 + 0.223602I$	$-2.89227 - 2.61557I$	$4.00000 + 0.I$
$u = -0.171086 - 1.013120I$ $a = -1.240710 - 0.320252I$ $b = 0.183330 - 0.223602I$	$-2.89227 + 2.61557I$	$4.00000 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.948455 + 0.085623I$ $a = -0.82199 + 1.24099I$ $b = -1.332150 + 0.245893I$	$-4.43555 - 4.42989I$	$3.57907 + 2.45374I$
$u = 0.948455 - 0.085623I$ $a = -0.82199 - 1.24099I$ $b = -1.332150 - 0.245893I$	$-4.43555 + 4.42989I$	$3.57907 - 2.45374I$
$u = 0.230974 + 1.025990I$ $a = -0.529050 + 1.197620I$ $b = -2.28839 - 0.58000I$	$2.79792 + 3.70869I$	0
$u = 0.230974 - 1.025990I$ $a = -0.529050 - 1.197620I$ $b = -2.28839 + 0.58000I$	$2.79792 - 3.70869I$	0
$u = -0.753813 + 0.569849I$ $a = 0.007602 - 0.307173I$ $b = -0.253666 + 0.408703I$	$2.13347 - 0.67945I$	$9.13563 + 0.70093I$
$u = -0.753813 - 0.569849I$ $a = 0.007602 + 0.307173I$ $b = -0.253666 - 0.408703I$	$2.13347 + 0.67945I$	$9.13563 - 0.70093I$
$u = 0.228817 + 0.896549I$ $a = 0.273889 - 0.255136I$ $b = -1.97284 + 3.60878I$	$-4.04258 + 1.08271I$	$11.21709 - 7.54652I$
$u = 0.228817 - 0.896549I$ $a = 0.273889 + 0.255136I$ $b = -1.97284 - 3.60878I$	$-4.04258 - 1.08271I$	$11.21709 + 7.54652I$
$u = 0.451538 + 0.991597I$ $a = -0.661238 + 0.590058I$ $b = -1.04730 - 2.04932I$	$1.15731 + 7.06397I$	0
$u = 0.451538 - 0.991597I$ $a = -0.661238 - 0.590058I$ $b = -1.04730 + 2.04932I$	$1.15731 - 7.06397I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.072770 + 0.230198I$ $a = 0.85636 - 1.12907I$ $b = 1.38317 - 0.30370I$	$-3.02705 - 10.41650I$	0
$u = 1.072770 - 0.230198I$ $a = 0.85636 + 1.12907I$ $b = 1.38317 + 0.30370I$	$-3.02705 + 10.41650I$	0
$u = -0.612070 + 0.941386I$ $a = 0.565613 - 0.052080I$ $b = 1.02901 - 1.19145I$	$1.08635 - 4.46104I$	0
$u = -0.612070 - 0.941386I$ $a = 0.565613 + 0.052080I$ $b = 1.02901 + 1.19145I$	$1.08635 + 4.46104I$	0
$u = -0.836204 + 0.261291I$ $a = -1.33600 + 1.06634I$ $b = -1.35173 + 0.47656I$	$-4.10363 + 2.39606I$	$3.81600 - 2.35228I$
$u = -0.836204 - 0.261291I$ $a = -1.33600 - 1.06634I$ $b = -1.35173 - 0.47656I$	$-4.10363 - 2.39606I$	$3.81600 + 2.35228I$
$u = 0.291875 + 1.098960I$ $a = -0.464893 - 0.352121I$ $b = -1.62372 + 0.26942I$	$-3.74319 + 0.35423I$	0
$u = 0.291875 - 1.098960I$ $a = -0.464893 + 0.352121I$ $b = -1.62372 - 0.26942I$	$-3.74319 - 0.35423I$	0
$u = -0.814736 + 0.183028I$ $a = -0.960227 + 0.069320I$ $b = -0.330314 + 0.069183I$	$3.36781 - 3.36881I$	$14.2825 + 3.4147I$
$u = -0.814736 - 0.183028I$ $a = -0.960227 - 0.069320I$ $b = -0.330314 - 0.069183I$	$3.36781 + 3.36881I$	$14.2825 - 3.4147I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.090816+0.822219I$ $a=-1.43478+0.31964I$ $b=-1.180510+0.536261I$	$-2.10787+1.28735I$	$-0.94828+1.56152I$
$u=-0.090816-0.822219I$ $a=-1.43478-0.31964I$ $b=-1.180510-0.536261I$	$-2.10787-1.28735I$	$-0.94828-1.56152I$
$u=\ 0.686083+0.978905I$ $a=-0.765292+1.051350I$ $b=-1.57564-0.25864I$	$5.92171+1.85310I$	0
$u=\ 0.686083-0.978905I$ $a=-0.765292-1.051350I$ $b=-1.57564+0.25864I$	$5.92171-1.85310I$	0
$u=\ 0.348220+0.717099I$ $a=\ 0.633784+1.212890I$ $b=\ 0.300550-0.658677I$	$0.72632-2.98385I$	$2.65867-1.61148I$
$u=\ 0.348220-0.717099I$ $a=\ 0.633784-1.212890I$ $b=\ 0.300550+0.658677I$	$0.72632+2.98385I$	$2.65867+1.61148I$
$u=\ 0.559248+0.542007I$ $a=\ 0.304713-0.769105I$ $b=\ 1.63410-0.28852I$	$2.49213-2.99410I$	$10.23774+2.77464I$
$u=\ 0.559248-0.542007I$ $a=\ 0.304713+0.769105I$ $b=\ 1.63410+0.28852I$	$2.49213+2.99410I$	$10.23774-2.77464I$
$u=\ 0.071021+0.771811I$ $a=\ 0.03076-1.73667I$ $b=\ 1.51208+1.30733I$	$3.99461-2.09346I$	$4.40638+4.85697I$
$u=\ 0.071021-0.771811I$ $a=\ 0.03076+1.73667I$ $b=\ 1.51208-1.30733I$	$3.99461+2.09346I$	$4.40638-4.85697I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.550268 + 1.099350I$ $a = 0.621185 + 0.125940I$ $b = 2.03807 + 0.21438I$	$-1.98384 + 7.01266I$	0
$u = 0.550268 - 1.099350I$ $a = 0.621185 - 0.125940I$ $b = 2.03807 - 0.21438I$	$-1.98384 - 7.01266I$	0
$u = -0.851304 + 0.913176I$ $a = 0.798557 + 0.326350I$ $b = 1.068680 - 0.466872I$	$2.18546 - 1.63429I$	0
$u = -0.851304 - 0.913176I$ $a = 0.798557 - 0.326350I$ $b = 1.068680 + 0.466872I$	$2.18546 + 1.63429I$	0
$u = 0.656597 + 0.322411I$ $a = 0.009722 + 1.058680I$ $b = -0.153000 - 0.490916I$	$0.19655 - 2.31294I$	$2.63030 + 3.93885I$
$u = 0.656597 - 0.322411I$ $a = 0.009722 - 1.058680I$ $b = -0.153000 + 0.490916I$	$0.19655 + 2.31294I$	$2.63030 - 3.93885I$
$u = -0.910749 + 0.899481I$ $a = -0.681027 - 0.535163I$ $b = -0.994698 + 0.400858I$	$2.24214 - 4.81846I$	0
$u = -0.910749 - 0.899481I$ $a = -0.681027 + 0.535163I$ $b = -0.994698 - 0.400858I$	$2.24214 + 4.81846I$	0
$u = -0.347418 + 1.242890I$ $a = 0.897027 + 0.556994I$ $b = 2.36861 - 1.55566I$	$-8.62556 - 1.39524I$	0
$u = -0.347418 - 1.242890I$ $a = 0.897027 - 0.556994I$ $b = 2.36861 + 1.55566I$	$-8.62556 + 1.39524I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.327113+1.269160I$ $a=-0.447376-0.279699I$ $b=-0.885740+0.124459I$	$-3.06231-3.20525I$	0
$u=-0.327113-1.269160I$ $a=-0.447376+0.279699I$ $b=-0.885740-0.124459I$	$-3.06231+3.20525I$	0
$u=\ 0.307931+0.612364I$ $a=-1.29884-0.76584I$ $b=-0.944065+0.409129I$	$-2.61771+1.38695I$	$0.42548-4.72459I$
$u=\ 0.307931-0.612364I$ $a=-1.29884+0.76584I$ $b=-0.944065-0.409129I$	$-2.61771-1.38695I$	$0.42548+4.72459I$
$u=-0.585251+1.199500I$ $a=-0.552128+1.160950I$ $b=\ 0.338923+0.505424I$	$-6.87606-7.71394I$	0
$u=-0.585251-1.199500I$ $a=-0.552128-1.160950I$ $b=\ 0.338923-0.505424I$	$-6.87606+7.71394I$	0
$u=\ 0.526112+1.266110I$ $a=\ 0.986760-0.358538I$ $b=\ 2.22186+1.40051I$	$-8.04182+9.70758I$	0
$u=\ 0.526112-1.266110I$ $a=\ 0.986760+0.358538I$ $b=\ 2.22186-1.40051I$	$-8.04182-9.70758I$	0
$u=\ 0.417829+1.314000I$ $a=-0.640898-0.878070I$ $b=-0.077620-0.324517I$	$-8.85194+0.38418I$	0
$u=\ 0.417829-1.314000I$ $a=-0.640898+0.878070I$ $b=-0.077620+0.324517I$	$-8.85194-0.38418I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.154627+1.375210I$ $a=\ \ 0.222651-0.081323I$ $b=-0.502565+0.009919I$	$-4.25898-3.13951I$	0
$u=-0.154627-1.375210I$ $a=\ \ 0.222651+0.081323I$ $b=-0.502565-0.009919I$	$-4.25898+3.13951I$	0
$u=-0.472127+1.305790I$ $a=-0.970835-0.577427I$ $b=-2.14130+1.05133I$	$-7.75277-8.37018I$	0
$u=-0.472127-1.305790I$ $a=-0.970835+0.577427I$ $b=-2.14130-1.05133I$	$-7.75277+8.37018I$	0
$u=-0.485385+1.325740I$ $a=\ \ 0.538637+0.179909I$ $b=\ \ 0.864234-0.172690I$	$-1.09461-8.18682I$	0
$u=-0.485385-1.325740I$ $a=\ \ 0.538637-0.179909I$ $b=\ \ 0.864234+0.172690I$	$-1.09461+8.18682I$	0
$u=-0.50188+1.32442I$ $a=\ \ 0.375415-0.996617I$ $b=-0.455184-0.473111I$	$-7.57640-2.11236I$	0
$u=-0.50188-1.32442I$ $a=\ \ 0.375415+0.996617I$ $b=-0.455184+0.473111I$	$-7.57640+2.11236I$	0
$u=\ \ 0.62233+1.28194I$ $a=-1.069290+0.406801I$ $b=-2.07922-1.15092I$	$-6.3009+16.4753I$	0
$u=\ \ 0.62233-1.28194I$ $a=-1.069290-0.406801I$ $b=-2.07922+1.15092I$	$-6.3009-16.4753I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.548644$ $a=\ \ 0.938206$ $b=\ \ 0.336065$	0.951713	10.2780
$u=\ \ 0.30872+1.43489I$ $a=\ \ 0.479050+0.788819I$ $b=-0.076582+0.370238I$	$-8.67982-5.51516I$	0
$u=\ \ 0.30872-1.43489I$ $a=\ \ 0.479050-0.788819I$ $b=-0.076582-0.370238I$	$-8.67982+5.51516I$	0

II.

$\boldsymbol{I_2^u = \langle u^{21}+2u^{20}+\cdots+b+2,\ -6u^{21}-7u^{20}+\cdots+a+7,\ u^{22}+2u^{21}+\cdots+2u+1\rangle}$

(i) Arc colorings

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

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

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

$$a_6 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 6u^{21}+7u^{20}+\cdots+7u-7 \\ -u^{21}-2u^{20}+\cdots+5u-2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -6u^{21}-13u^{20}+\cdots-35u-9 \\ -u^{20}-2u^{19}+\cdots-3u-2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 10u^{21}+12u^{20}+\cdots+13u-11 \\ u^{21}+2u^{20}+\cdots+9u+1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2u^{21}-4u^{20}+\cdots-18u-19 \\ u^{21}+u^{20}+\cdots-5u-6 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 8u^{21}+11u^{20}+\cdots+13u-11 \\ 2u^{21}+4u^{20}+\cdots+10u+1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 8u^{21}+10u^{20}+\cdots+10u-15 \\ 3u^{21}+5u^{20}+\cdots+9u-2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^{21}-5u^{20}+\cdots-13u-13 \\ u^{21}+u^{20}+\cdots-5u-6 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= -6u^{21}-9u^{20}-34u^{19}-38u^{18}-100u^{17}-95u^{16}-208u^{15}-158u^{14}-307u^{13}-182u^{12}-348u^{11}-137u^{10}-288u^9-36u^8-183u^7+43u^6-64u^5+69u^4-21u^3+45u^2-4u+20$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{22} - 12u^{21} + \cdots - 16u + 1$
c_2	$u^{22} + 2u^{21} + \cdots + 2u + 1$
c_3	$u^{22} - 9u^{20} + \cdots - 8u^2 + 1$
c_4	$u^{22} - 6u^{20} + \cdots + 5u^2 + 1$
c_5	$u^{22} - 2u^{21} + \cdots - 2u + 1$
c_6	$u^{22} - 2u^{21} + \cdots - 2u + 1$
c_7, c_8	$u^{22} - 9u^{20} + \cdots - 8u^2 + 1$
c_9	$u^{22} - 2u^{21} + \cdots + 4u^2 + 1$
c_{10}	$u^{22} + 10u^{21} + \cdots + 18u + 1$
c_{11}	$u^{22} + 2u^{21} + \cdots + 2u + 1$
c_{12}	$u^{22} + 9u^{20} + \cdots + 7u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{22} + 8y^{21} + \cdots - 8y + 1$
c_2, c_5	$y^{22} + 12y^{21} + \cdots + 16y + 1$
c_3, c_7, c_8	$y^{22} - 18y^{21} + \cdots - 16y + 1$
c_4	$y^{22} - 12y^{21} + \cdots + 10y + 1$
c_6, c_{11}	$y^{22} + 10y^{21} + \cdots + 18y + 1$
c_9	$y^{22} - 14y^{21} + \cdots + 8y + 1$
c_{10}	$y^{22} + 2y^{21} + \cdots - 18y + 1$
c_{12}	$y^{22} + 18y^{21} + \cdots + 14y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.241973+0.958544I$ $a=-0.490866+0.123430I$ $b=-2.10277-2.55701I$	$-4.38986-0.97753I$	$-11.44106+0.80561I$
$u=-0.241973-0.958544I$ $a=-0.490866-0.123430I$ $b=-2.10277+2.55701I$	$-4.38986+0.97753I$	$-11.44106-0.80561I$
$u=\ \ 0.680342+0.808019I$ $a=-1.11141+1.19166I$ $b=-1.44518-0.36748I$	$6.14692+4.23019I$	$6.87486-8.22378I$
$u=\ \ 0.680342-0.808019I$ $a=-1.11141-1.19166I$ $b=-1.44518+0.36748I$	$6.14692-4.23019I$	$6.87486+8.22378I$
$u=\ \ 0.381053+0.993854I$ $a=\ \ 0.485823-0.931803I$ $b=\ \ 2.51178+0.40690I$	$3.50530+4.41296I$	$8.17984-7.57278I$
$u=\ \ 0.381053-0.993854I$ $a=\ \ 0.485823+0.931803I$ $b=\ \ 2.51178-0.40690I$	$3.50530-4.41296I$	$8.17984+7.57278I$
$u=-0.864576+0.756693I$ $a=-0.705540-0.375538I$ $b=-0.712469+0.591982I$	$3.13466-4.55728I$	$13.4598+7.0179I$
$u=-0.864576-0.756693I$ $a=-0.705540+0.375538I$ $b=-0.712469-0.591982I$	$3.13466+4.55728I$	$13.4598-7.0179I$
$u=\ \ 0.344344+0.775789I$ $a=-0.23930+1.47914I$ $b=-1.60383-1.37208I$	$4.32626-1.33597I$	$9.03146-2.86152I$
$u=\ \ 0.344344-0.775789I$ $a=-0.23930-1.47914I$ $b=-1.60383+1.37208I$	$4.32626+1.33597I$	$9.03146+2.86152I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.683857 + 0.953567I$ $a = 0.986932 - 0.976839I$ $b = 1.58711 + 0.21263I$	$5.68936 + 1.04482I$	$6.35421 + 3.19394I$
$u = 0.683857 - 0.953567I$ $a = 0.986932 + 0.976839I$ $b = 1.58711 - 0.21263I$	$5.68936 - 1.04482I$	$6.35421 - 3.19394I$
$u = -0.483198 + 1.148360I$ $a = 0.511255 - 0.042735I$ $b = 1.178750 + 0.403621I$	$-1.14942 - 7.14765I$	$5.07018 + 7.28569I$
$u = -0.483198 - 1.148360I$ $a = 0.511255 + 0.042735I$ $b = 1.178750 - 0.403621I$	$-1.14942 + 7.14765I$	$5.07018 - 7.28569I$
$u = -0.887565 + 0.930577I$ $a = 0.669634 + 0.226011I$ $b = 0.920717 - 0.461715I$	$2.63405 - 1.92174I$	$16.1641 + 7.0514I$
$u = -0.887565 - 0.930577I$ $a = 0.669634 - 0.226011I$ $b = 0.920717 + 0.461715I$	$2.63405 + 1.92174I$	$16.1641 - 7.0514I$
$u = -0.182700 + 1.302970I$ $a = -0.532890 + 0.197172I$ $b = 0.140687 + 0.127074I$	$-4.66681 - 2.93382I$	$-4.96536 - 0.66259I$
$u = -0.182700 - 1.302970I$ $a = -0.532890 - 0.197172I$ $b = 0.140687 - 0.127074I$	$-4.66681 + 2.93382I$	$-4.96536 + 0.66259I$
$u = -0.321038 + 0.588930I$ $a = 0.76251 - 1.19934I$ $b = 0.970661 + 0.503731I$	$1.05601 + 3.62165I$	$7.15284 - 7.64302I$
$u = -0.321038 - 0.588930I$ $a = 0.76251 + 1.19934I$ $b = 0.970661 - 0.503731I$	$1.05601 - 3.62165I$	$7.15284 + 7.64302I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.108546+0.545335I$		
$a=-2.33615+0.39651I$	$-1.48208+1.54693I$	$10.61918-2.30760I$
$b=-0.945452+0.497914I$		
$u=-0.108546-0.545335I$		
$a=-2.33615-0.39651I$	$-1.48208-1.54693I$	$10.61918+2.30760I$
$b=-0.945452-0.497914I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{22}-12u^{21}+\cdots-16u+1)(u^{73}+43u^{72}+\cdots-318262u-20449)$
c_2	$(u^{22}+2u^{21}+\cdots+2u+1)(u^{73}-u^{72}+\cdots-54u-143)$
c_3	$(u^{22}-9u^{20}+\cdots-8u^2+1)(u^{73}+u^{72}+\cdots-18u-1)$
c_4	$(u^{22}-6u^{20}+\cdots+5u^2+1)(u^{73}-u^{72}+\cdots-26u-3)$
c_5	$(u^{22}-2u^{21}+\cdots-2u+1)(u^{73}-u^{72}+\cdots-54u-143)$
c_6	$(u^{22}-2u^{21}+\cdots-2u+1)(u^{73}+u^{72}+\cdots+280u-119)$
c_7, c_8	$(u^{22}-9u^{20}+\cdots-8u^2+1)(u^{73}+u^{72}+\cdots-18u-1)$
c_9	$(u^{22}-2u^{21}+\cdots+4u^2+1)(u^{73}-5u^{72}+\cdots+22u-1)$
c_{10}	$(u^{22}+10u^{21}+\cdots+18u+1)(u^{73}-25u^{72}+\cdots-219576u+14161)$
c_{11}	$(u^{22}+2u^{21}+\cdots+2u+1)(u^{73}+u^{72}+\cdots+280u-119)$
c_{12}	$(u^{22}+9u^{20}+\cdots+7u^2+1)(u^{73}+5u^{72}+\cdots-14u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{22}+8y^{21}+\cdots-8y+1)$ $\cdot(y^{73}-13y^{72}+\cdots+6813662274y-418161601)$
c_2, c_5	$(y^{22}+12y^{21}+\cdots+16y+1)(y^{73}+43y^{72}+\cdots-318262y-20449)$
c_3, c_7, c_8	$(y^{22}-18y^{21}+\cdots-16y+1)(y^{73}-19y^{72}+\cdots+78y-1)$
c_4	$(y^{22}-12y^{21}+\cdots+10y+1)(y^{73}-9y^{72}+\cdots-140y-9)$
c_6, c_{11}	$(y^{22}+10y^{21}+\cdots+18y+1)(y^{73}+25y^{72}+\cdots-219576y-14161)$
c_9	$(y^{22}-14y^{21}+\cdots+8y+1)(y^{73}-71y^{72}+\cdots+74y-1)$
c_{10}	$(y^{22}+2y^{21}+\cdots-18y+1)$ $\cdot(y^{73}+45y^{72}+\cdots+7780282916y-200533921)$
c_{12}	$(y^{22}+18y^{21}+\cdots+14y+1)(y^{73}+65y^{72}+\cdots-124y-1)$