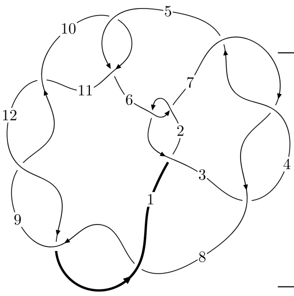
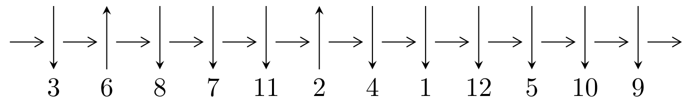
$12a_{0270}$ $(K12a_{0270})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -798268399u^{41} + 6250449929u^{40} + \cdots + 103576805 12b - 2584646788, \\
& -358149411u^{41} + 2967411165u^{40} + \cdots + 5178840256a - 14354766596, \\
& u^{42} - 8u^{41} + \cdots + 19u + 4\rangle \\
I_2^u = \langle & u^4a^2 - 3u^3a^2 + 3u^4a + 4a^2u^2 + 2u^4 - 5a^2u + 3u^2a - 6u^3 + a^2 + 3au + 8u^2 + 3b - 3a - 10u + 2, \\
& 2u^4a^2 - 2u^3a^2 + 3u^4a + 8a^2u^2 - 2u^3a + a^3 - 6a^2u + 11u^2a + 6a^2 - 5au + 10a + u, \\
& u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1\rangle \\
I_3^u = \langle & -u^3 + u^2 + b + a - 3u + 2,\ -2u^3a + 2u^2a - 2u^3 + a^2 - 6au + u^2 + 4a - 5u + 2,\ u^4 - u^3 + 3u^2 - 2u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 65 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.
$\boldsymbol{I_1^u = \langle -7.98\times10^{8}u^{41}+6.25\times10^{9}u^{40}+\cdots+1.04\times10^{10}b-2.58\times10^{9},\ -3.58\times10^{8}u^{41}+2.97\times10^{9}u^{40}+\cdots+5.18\times10^{9}a-1.44\times10^{10},\ u^{42}-8u^{41}+\cdots+19u+4\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0691563u^{41} - 0.572988u^{40} + \cdots + 3.90826u + 2.77181 \\ 0.0770702u^{41} - 0.603460u^{40} + \cdots - 0.703314u + 0.249539 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.146226u^{41} - 1.17645u^{40} + \cdots + 3.20495u + 3.02135 \\ 0.0770702u^{41} - 0.603460u^{40} + \cdots - 0.703314u + 0.249539 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.0816169u^{41} - 0.664619u^{40} + \cdots + 6.14207u + 0.645428 \\ 0.0288129u^{41} - 0.231921u^{40} + \cdots + 1.24875u + 0.105032 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.0196220u^{41} + 0.147935u^{40} + \cdots - 6.11036u + 0.584750 \\ -0.00663609u^{41} + 0.0909429u^{40} + \cdots + 1.05555u + 0.165094 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.0115304u^{41} - 0.109146u^{40} + \cdots + 7.16076u + 1.81175 \\ 0.0576259u^{41} - 0.463842u^{40} + \cdots - 0.502505u + 0.210065 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.0525162u^{41} + 0.477755u^{40} + \cdots - 5.10962u - 1.50031 \\ -0.0197372u^{41} + 0.196786u^{40} + \cdots + 0.707841u - 0.276625 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 + 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1891553825}{2589420128}u^{41} - \frac{14308919975}{2589420128}u^{40} + \cdots + \frac{33847466689}{2589420128}u - \frac{1329586633}{647355032}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{42} + 13u^{41} + \cdots + 147u + 4$
c_2, c_6	$u^{42} - u^{41} + \cdots - 11u + 2$
c_3, c_4, c_7	$u^{42} - u^{41} + \cdots - 17u + 2$
c_5, c_{10}	$u^{42} - 2u^{41} + \cdots - u + 2$
c_8, c_9, c_{11} c_{12}	$u^{42} + 8u^{41} + \cdots - 19u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{42} + 41y^{41} + \cdots - 1601y + 16$
c_2, c_6	$y^{42} + 13y^{41} + \cdots + 147y + 4$
c_3, c_4, c_7	$y^{42} + 49y^{41} + \cdots + 163y + 4$
c_5, c_{10}	$y^{42} - 8y^{41} + \cdots + 19y + 4$
c_8, c_9, c_{11} c_{12}	$y^{42} + 52y^{41} + \cdots - 593y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.199296 + 0.987147I$ $a = -1.16462 - 1.63691I$ $b = -0.07090 + 1.52196I$	$9.23309 - 0.66880I$	$0. + 2.09820I$
$u = -0.199296 - 0.987147I$ $a = -1.16462 + 1.63691I$ $b = -0.07090 - 1.52196I$	$9.23309 + 0.66880I$	$0. - 2.09820I$
$u = 0.838964 + 0.514549I$ $a = 0.469470 - 0.436996I$ $b = -0.043564 + 1.403040I$	$2.90089 - 0.20752I$	$-6.26688 + 0.I$
$u = 0.838964 - 0.514549I$ $a = 0.469470 + 0.436996I$ $b = -0.043564 - 1.403040I$	$2.90089 + 0.20752I$	$-6.26688 + 0.I$
$u = 0.915478 + 0.320876I$ $a = -0.717082 + 0.350239I$ $b = -0.16817 - 1.42645I$	$2.31734 - 5.40050I$	$-8.00000 + 6.13743I$
$u = 0.915478 - 0.320876I$ $a = -0.717082 - 0.350239I$ $b = -0.16817 + 1.42645I$	$2.31734 + 5.40050I$	$-8.00000 - 6.13743I$
$u = 0.450384 + 1.002590I$ $a = -0.392271 + 0.489442I$ $b = -0.762687 - 0.383581I$	$0.60208 - 6.73872I$	0
$u = 0.450384 - 1.002590I$ $a = -0.392271 - 0.489442I$ $b = -0.762687 + 0.383581I$	$0.60208 + 6.73872I$	0
$u = -0.302006 + 0.836923I$ $a = 1.67864 + 1.44506I$ $b = 0.22550 - 1.51897I$	$8.07529 + 5.48503I$	$-0.70916 - 2.91852I$
$u = -0.302006 - 0.836923I$ $a = 1.67864 - 1.44506I$ $b = 0.22550 + 1.51897I$	$8.07529 - 5.48503I$	$-0.70916 + 2.91852I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.060244 + 0.788682I$ $a = 0.605228 + 0.925856I$ $b = 0.693973 - 0.485377I$	$1.48615 + 2.15029I$	$-3.71859 - 3.19032I$
$u = -0.060244 - 0.788682I$ $a = 0.605228 - 0.925856I$ $b = 0.693973 + 0.485377I$	$1.48615 - 2.15029I$	$-3.71859 + 3.19032I$
$u = 0.509270 + 0.583804I$ $a = -0.220296 + 1.029270I$ $b = -0.264495 + 0.109372I$	$-1.98852 - 1.21898I$	$-14.0512 + 3.6292I$
$u = 0.509270 - 0.583804I$ $a = -0.220296 - 1.029270I$ $b = -0.264495 - 0.109372I$	$-1.98852 + 1.21898I$	$-14.0512 - 3.6292I$
$u = 0.588709 + 1.120860I$ $a = -1.07852 + 1.38460I$ $b = -0.26708 - 1.48568I$	$6.68238 - 10.46650I$	0
$u = 0.588709 - 1.120860I$ $a = -1.07852 - 1.38460I$ $b = -0.26708 + 1.48568I$	$6.68238 + 10.46650I$	0
$u = 0.701442 + 0.208159I$ $a = -0.779517 - 0.388802I$ $b = -0.556875 - 0.244623I$	$-3.10427 - 2.84153I$	$-15.5735 + 6.4385I$
$u = 0.701442 - 0.208159I$ $a = -0.779517 + 0.388802I$ $b = -0.556875 + 0.244623I$	$-3.10427 + 2.84153I$	$-15.5735 - 6.4385I$
$u = 0.439199 + 1.197000I$ $a = 0.69981 - 1.54440I$ $b = 0.13274 + 1.47292I$	$8.27660 - 4.56148I$	0
$u = 0.439199 - 1.197000I$ $a = 0.69981 + 1.54440I$ $b = 0.13274 - 1.47292I$	$8.27660 + 4.56148I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.220775 + 0.575673I$ $a = -0.342696 - 0.818451I$ $b = 0.139249 + 0.831769I$	$1.40137 - 1.70947I$	$-0.06449 + 5.59686I$
$u = 0.220775 - 0.575673I$ $a = -0.342696 + 0.818451I$ $b = 0.139249 - 0.831769I$	$1.40137 + 1.70947I$	$-0.06449 - 5.59686I$
$u = 0.11412 + 1.52011I$ $a = 0.001825 - 1.058650I$ $b = 0.013978 + 1.115610I$	$8.31413 - 3.12469I$	0
$u = 0.11412 - 1.52011I$ $a = 0.001825 + 1.058650I$ $b = 0.013978 - 1.115610I$	$8.31413 + 3.12469I$	0
$u = -0.453394 + 0.093145I$ $a = -0.29248 + 1.41477I$ $b = 0.09646 + 1.48180I$	$5.82303 - 2.87870I$	$0.05391 + 2.88471I$
$u = -0.453394 - 0.093145I$ $a = -0.29248 - 1.41477I$ $b = 0.09646 - 1.48180I$	$5.82303 + 2.87870I$	$0.05391 - 2.88471I$
$u = 0.09947 + 1.57211I$ $a = -0.005582 + 0.932064I$ $b = -0.027777 - 0.190004I$	$5.22550 - 3.18763I$	0
$u = 0.09947 - 1.57211I$ $a = -0.005582 - 0.932064I$ $b = -0.027777 + 0.190004I$	$5.22550 + 3.18763I$	0
$u = -0.01154 + 1.67140I$ $a = -0.049530 + 0.747153I$ $b = 0.911882 - 0.498339I$	$10.24920 + 2.39200I$	0
$u = -0.01154 - 1.67140I$ $a = -0.049530 - 0.747153I$ $b = 0.911882 + 0.498339I$	$10.24920 - 2.39200I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.08120 + 1.67874I$ $a = 0.80016 + 1.97320I$ $b = 0.33059 - 1.55890I$	$16.9456 + 6.9601I$	0
$u = -0.08120 - 1.67874I$ $a = 0.80016 - 1.97320I$ $b = 0.33059 + 1.55890I$	$16.9456 - 6.9601I$	0
$u = 0.12364 + 1.71287I$ $a = 0.056715 + 0.692130I$ $b = -0.920998 - 0.474791I$	$10.09190 - 9.06080I$	0
$u = 0.12364 - 1.71287I$ $a = 0.056715 - 0.692130I$ $b = -0.920998 + 0.474791I$	$10.09190 + 9.06080I$	0
$u = -0.03891 + 1.71786I$ $a = -0.51740 - 2.10632I$ $b = -0.20263 + 1.61169I$	$18.9080 + 0.2132I$	0
$u = -0.03891 - 1.71786I$ $a = -0.51740 + 2.10632I$ $b = -0.20263 - 1.61169I$	$18.9080 - 0.2132I$	0
$u = 0.17216 + 1.75098I$ $a = -0.74841 + 1.91623I$ $b = -0.34100 - 1.54865I$	$16.6556 - 13.6886I$	0
$u = 0.17216 - 1.75098I$ $a = -0.74841 - 1.91623I$ $b = -0.34100 + 1.54865I$	$16.6556 + 13.6886I$	0
$u = 0.12140 + 1.76169I$ $a = 0.47312 - 2.07005I$ $b = 0.21928 + 1.60308I$	$18.7265 - 6.9926I$	0
$u = 0.12140 - 1.76169I$ $a = 0.47312 + 2.07005I$ $b = 0.21928 - 1.60308I$	$18.7265 + 6.9926I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.148412 + 0.075498I$ $a = 1.14844 + 3.46411I$ $b = 0.362523 + 0.421697I$	$-0.422743 - 1.307230I$	$-4.54925 + 5.05506I$
$u = -0.148412 - 0.075498I$ $a = 1.14844 - 3.46411I$ $b = 0.362523 - 0.421697I$	$-0.422743 + 1.307230I$	$-4.54925 - 5.05506I$

II. $\boldsymbol{I_2^u = \langle u^4a^2 + 3u^4a + \cdots - 3a + 2,\ 2u^4a^2 + 3u^4a + \cdots + 6a^2 + 10a,\ u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^4 + 4u^3 - 16u^2 + 12u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{15} + 10u^{14} + \cdots + 3u - 1$
c_2, c_3, c_4 c_6, c_7	$u^{15} + 5u^{13} + \cdots + 3u + 1$
c_5, c_{10}	$(u^5 + u^4 - u^2 + u + 1)^3$
c_8, c_9, c_{11} c_{12}	$(u^5 + u^4 + 4u^3 + 3u^2 + 3u + 1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{15} - 10y^{14} + \cdots + 47y - 1$
c_2, c_3, c_4 c_6, c_7	$y^{15} + 10y^{14} + \cdots + 3y - 1$
c_5, c_{10}	$(y^5 - y^4 + 4y^3 - 3y^2 + 3y - 1)^3$
c_8, c_9, c_{11} c_{12}	$(y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.233677 + 0.885557I$ $a = -0.387789 - 0.623465I$ $b = -0.497623 + 0.756574I$	$1.81981 - 2.21397I$	$-3.11432 + 4.22289I$
$u = 0.233677 + 0.885557I$ $a = 0.085680 - 0.388688I$ $b = 0.555046 + 0.543774I$	$1.81981 - 2.21397I$	$-3.11432 + 4.22289I$
$u = 0.233677 + 0.885557I$ $a = -0.25505 + 3.12360I$ $b = -0.057423 - 1.300350I$	$1.81981 - 2.21397I$	$-3.11432 + 4.22289I$
$u = 0.233677 - 0.885557I$ $a = -0.387789 + 0.623465I$ $b = -0.497623 - 0.756574I$	$1.81981 + 2.21397I$	$-3.11432 - 4.22289I$
$u = 0.233677 - 0.885557I$ $a = 0.085680 + 0.388688I$ $b = 0.555046 - 0.543774I$	$1.81981 + 2.21397I$	$-3.11432 - 4.22289I$
$u = 0.233677 - 0.885557I$ $a = -0.25505 - 3.12360I$ $b = -0.057423 + 1.300350I$	$1.81981 + 2.21397I$	$-3.11432 - 4.22289I$
$u = 0.416284$ $a = -0.0435290$ $b = 0.366895$	-0.882183	-11.6090
$u = 0.416284$ $a = -2.38044 + 1.97405I$ $b = -0.183448 - 1.049270I$	-0.882183	-11.6090
$u = 0.416284$ $a = -2.38044 - 1.97405I$ $b = -0.183448 + 1.049270I$	-0.882183	-11.6090
$u = 0.05818 + 1.69128I$ $a = 0.091113 - 0.799543I$ $b = -0.778812 + 0.748610I$	$10.95830 - 3.33174I$	$-2.08126 + 2.36228I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.05818 + 1.69128I$ $a = -0.117137 - 0.758678I$ $b = 0.789470 + 0.718695I$	$10.95830 - 3.33174I$	$-2.08126 + 2.36228I$
$u = 0.05818 + 1.69128I$ $a = -0.01461 + 2.73936I$ $b = -0.01066 - 1.46731I$	$10.95830 - 3.33174I$	$-2.08126 + 2.36228I$
$u = 0.05818 - 1.69128I$ $a = 0.091113 + 0.799543I$ $b = -0.778812 - 0.748610I$	$10.95830 + 3.33174I$	$-2.08126 - 2.36228I$
$u = 0.05818 - 1.69128I$ $a = -0.117137 + 0.758678I$ $b = 0.789470 - 0.718695I$	$10.95830 + 3.33174I$	$-2.08126 - 2.36228I$
$u = 0.05818 - 1.69128I$ $a = -0.01461 - 2.73936I$ $b = -0.01066 + 1.46731I$	$10.95830 + 3.33174I$	$-2.08126 - 2.36228I$

III.

$\boldsymbol{I_3^u = \langle -u^3+u^2+b+a-3u+2,\ -2u^3a-2u^3+\cdots+4a+2,\ u^4-u^3+3u^2-2u+1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u^3-4u^2+12u-12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.395123 + 0.506844I$ $a = -0.956685 + 0.227186I$ $b = 1.000000I$	$-0.21101 - 1.41510I$	$-7.82674 + 4.90874I$
$u = 0.395123 + 0.506844I$ $a = -0.95668 + 2.22719I$ $b = -1.000000I$	$-0.21101 - 1.41510I$	$-7.82674 + 4.90874I$
$u = 0.395123 - 0.506844I$ $a = -0.956685 - 0.227186I$ $b = -1.000000I$	$-0.21101 + 1.41510I$	$-7.82674 - 4.90874I$
$u = 0.395123 - 0.506844I$ $a = -0.95668 - 2.22719I$ $b = 1.000000I$	$-0.21101 + 1.41510I$	$-7.82674 - 4.90874I$
$u = 0.10488 + 1.55249I$ $a = -0.043315 - 0.358800I$ $b = 1.000000I$	$6.79074 - 3.16396I$	$-4.17326 + 2.56480I$
$u = 0.10488 + 1.55249I$ $a = -0.04332 + 1.64120I$ $b = -1.000000I$	$6.79074 - 3.16396I$	$-4.17326 + 2.56480I$
$u = 0.10488 - 1.55249I$ $a = -0.043315 + 0.358800I$ $b = -1.000000I$	$6.79074 + 3.16396I$	$-4.17326 - 2.56480I$
$u = 0.10488 - 1.55249I$ $a = -0.04332 - 1.64120I$ $b = 1.000000I$	$6.79074 + 3.16396I$	$-4.17326 - 2.56480I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^8)(u^{15}+10u^{14}+\cdots+3u-1)(u^{42}+13u^{41}+\cdots+147u+4)$
c_2, c_6	$((u^2+1)^4)(u^{15}+5u^{13}+\cdots+3u+1)(u^{42}-u^{41}+\cdots-11u+2)$
c_3, c_4, c_7	$((u^2+1)^4)(u^{15}+5u^{13}+\cdots+3u+1)(u^{42}-u^{41}+\cdots-17u+2)$
c_5, c_{10}	$((u^5+u^4-u^2+u+1)^3)(u^8-u^6+3u^4-2u^2+1)(u^{42}-2u^{41}+\cdots-u+2)$
c_8, c_9	$(u^4-u^3+3u^2-2u+1)^2(u^5+u^4+4u^3+3u^2+3u+1)^3 \cdot (u^{42}+8u^{41}+\cdots-19u+4)$
c_{11}, c_{12}	$(u^4+u^3+3u^2+2u+1)^2(u^5+u^4+4u^3+3u^2+3u+1)^3 \cdot (u^{42}+8u^{41}+\cdots-19u+4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^8)(y^{15}-10y^{14}+\cdots+47y-1)(y^{42}+41y^{41}+\cdots-1601y+16)$
c_2, c_6	$((y+1)^8)(y^{15}+10y^{14}+\cdots+3y-1)(y^{42}+13y^{41}+\cdots+147y+4)$
c_3, c_4, c_7	$((y+1)^8)(y^{15}+10y^{14}+\cdots+3y-1)(y^{42}+49y^{41}+\cdots+163y+4)$
c_5, c_{10}	$(y^4-y^3+3y^2-2y+1)^2(y^5-y^4+4y^3-3y^2+3y-1)^3$ $\cdot(y^{42}-8y^{41}+\cdots+19y+4)$
c_8, c_9, c_{11} c_{12}	$(y^4+5y^3+7y^2+2y+1)^2(y^5+7y^4+16y^3+13y^2+3y-1)^3$ $\cdot(y^{42}+52y^{41}+\cdots-593y+16)$