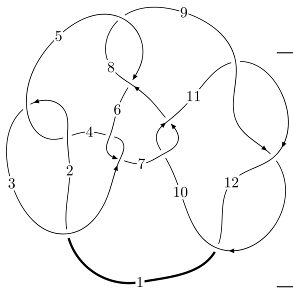
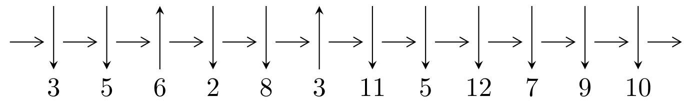
$12n_{0089}$ $(K12n_{0089})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 1.87206 \times 10^{64} u^{33} - 2.48020 \times 10^{64} u^{32} + \cdots + 2.02349 \times 10^{64} b + 8.89696 \times 10^{65}, \\
& - 6.94907 \times 10^{63} u^{33} + 9.26153 \times 10^{63} u^{32} + \cdots + 2.89069 \times 10^{63} a - 3.41795 \times 10^{65}, \\
& u^{34} - 2u^{33} + \cdots + 160u - 32 \rangle \\
I_2^u = \langle & -2u^7 + u^6 + 3u^5 - 3u^4 - 4u^3 + 3u^2 + b + 2u - 4,\ 6u^7 - 2u^6 - 8u^5 + 7u^4 + 11u^3 - 5u^2 + a - 4u + 9, \\
& u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1 \rangle
\end{aligned}$$

$$I_1^v = \langle a,\ -16v^4 - 47v^3 - 36v^2 + 29b - 104v + 5,\ v^5 + 3v^4 + 3v^3 + 8v^2 + v + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 47 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. $\boldsymbol{I_1^u = \langle 1.87 \times 10^{64} u^{33} - 2.48 \times 10^{64} u^{32} + \cdots + 2.02 \times 10^{64} b + 8.90 \times 10^{65},\ -6.95 \times 10^{63} u^{33} + 9.26 \times 10^{63} u^{32} + \cdots + 2.89 \times 10^{63} a - 3.42 \times 10^{65},\ u^{34} - 2u^{33} + \cdots + 160u - 32 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.40394u^{33} - 3.20391u^{32} + \cdots - 401.792u + 118.240 \\ -0.925166u^{33} + 1.22571u^{32} + \cdots + 151.603u - 43.9685 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 0.0490683u^{33} - 0.0407884u^{32} + \cdots - 6.92779u + 0.312774 \\ -0.0578563u^{33} + 0.0671443u^{32} + \cdots + 7.65767u - 1.83101 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.00878796u^{33} + 0.0263559u^{32} + \cdots + 0.729884u - 1.51823 \\ -0.0578563u^{33} + 0.0671443u^{32} + \cdots + 7.65767u - 1.83101 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.135575u^{33} - 0.179353u^{32} + \cdots - 21.7295u + 6.37504 \\ -0.0869253u^{33} + 0.113172u^{32} + \cdots + 14.9258u - 4.00887 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.159247u^{33} + 0.209304u^{32} + \cdots + 26.3062u - 7.44642 \\ 0.0515752u^{33} - 0.0698375u^{32} + \cdots - 7.79789u + 2.42273 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.36320u^{33} - 3.16331u^{32} + \cdots - 395.428u + 117.533 \\ -0.844124u^{33} + 1.12821u^{32} + \cdots + 140.065u - 41.0098 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.222500u^{33} - 0.292525u^{32} + \cdots - 36.6553u + 10.3839 \\ -0.0181808u^{33} + 0.0260797u^{32} + \cdots + 2.35027u - 0.870343 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2.25921u^{33} - 3.02557u^{32} + \cdots - 381.646u + 112.963 \\ -0.870163u^{33} + 1.15421u^{32} + \cdots + 144.300u - 42.2250 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.73770u^{33} + 2.33240u^{32} + \cdots + 305.829u - 87.7743$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{34} + 50u^{33} + \cdots + 7022u + 1$
c_2, c_4	$u^{34} - 10u^{33} + \cdots - 94u + 1$
c_3, c_6	$u^{34} + 6u^{33} + \cdots + 1408u + 256$
c_5, c_8	$u^{34} - 3u^{33} + \cdots + 2u - 1$
c_7, c_{10}	$u^{34} + 2u^{33} + \cdots - 160u - 32$
c_9, c_{11}, c_{12}	$u^{34} - 7u^{33} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{34} - 122y^{33} + \cdots - 49242950y + 1$
c_2, c_4	$y^{34} - 50y^{33} + \cdots - 7022y + 1$
c_3, c_6	$y^{34} + 54y^{33} + \cdots - 5357568y + 65536$
c_5, c_8	$y^{34} - y^{33} + \cdots - 14y + 1$
c_7, c_{10}	$y^{34} - 36y^{33} + \cdots - 3584y + 1024$
c_9, c_{11}, c_{12}	$y^{34} - 41y^{33} + \cdots - 152y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.956156 + 0.210490I$ $a = 0.92043 - 2.41941I$ $b = -0.297004 + 1.016390I$	$-3.57437 - 2.68652I$	$-15.9734 + 5.7320I$
$u = -0.956156 - 0.210490I$ $a = 0.92043 + 2.41941I$ $b = -0.297004 - 1.016390I$	$-3.57437 + 2.68652I$	$-15.9734 - 5.7320I$
$u = -0.825291 + 0.508770I$ $a = 0.290634 + 0.392014I$ $b = 0.215796 + 0.185230I$	$1.50616 + 2.15286I$	$-1.89528 - 3.55598I$
$u = -0.825291 - 0.508770I$ $a = 0.290634 - 0.392014I$ $b = 0.215796 - 0.185230I$	$1.50616 - 2.15286I$	$-1.89528 + 3.55598I$
$u = -0.459276 + 0.600077I$ $a = 0.34212 - 2.13952I$ $b = 0.325798 + 0.681195I$	$-4.37210 + 0.56022I$	$-15.7627 - 4.5815I$
$u = -0.459276 - 0.600077I$ $a = 0.34212 + 2.13952I$ $b = 0.325798 - 0.681195I$	$-4.37210 - 0.56022I$	$-15.7627 + 4.5815I$
$u = -1.25779$ $a = 0.262102$ $b = -0.999548$	-7.19178	-11.0680
$u = 0.421643 + 0.589535I$ $a = 0.76749 - 1.22638I$ $b = -0.076416 - 0.398409I$	$-1.23502 + 0.89870I$	$-5.08124 + 0.75731I$
$u = 0.421643 - 0.589535I$ $a = 0.76749 + 1.22638I$ $b = -0.076416 + 0.398409I$	$-1.23502 - 0.89870I$	$-5.08124 - 0.75731I$
$u = 0.679857 + 0.008937I$ $a = 1.75490 - 5.31791I$ $b = -0.87873 + 2.06096I$	$-2.48043 + 0.15884I$	$-35.3818 - 0.1674I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.679857 - 0.008937I$ $a = 1.75490 + 5.31791I$ $b = -0.87873 - 2.06096I$	$-2.48043 - 0.15884I$	$-35.3818 + 0.1674I$
$u = 1.204240 + 0.640025I$ $a = 0.153762 - 0.187566I$ $b = 0.460927 + 0.211334I$	$-3.73420 - 5.65524I$	$-8.00000 + 0.I$
$u = 1.204240 - 0.640025I$ $a = 0.153762 + 0.187566I$ $b = 0.460927 - 0.211334I$	$-3.73420 + 5.65524I$	$-8.00000 + 0.I$
$u = 0.610196$ $a = 0.685401$ $b = -0.364452$	-0.859418	-11.8170
$u = -0.021309 + 0.580331I$ $a = 0.0854012 - 0.0908812I$ $b = -0.412066 + 1.299410I$	$-7.07612 - 4.33049I$	$-3.74509 + 2.01968I$
$u = -0.021309 - 0.580331I$ $a = 0.0854012 + 0.0908812I$ $b = -0.412066 - 1.299410I$	$-7.07612 + 4.33049I$	$-3.74509 - 2.01968I$
$u = 0.033914 + 0.417650I$ $a = 0.837170 - 0.008519I$ $b = 0.336239 - 0.914967I$	$-0.57544 - 1.50411I$	$-4.52476 + 4.55824I$
$u = 0.033914 - 0.417650I$ $a = 0.837170 + 0.008519I$ $b = 0.336239 + 0.914967I$	$-0.57544 + 1.50411I$	$-4.52476 - 4.55824I$
$u = 0.333190$ $a = 5.02872$ $b = -1.11629$	-2.28474	0.324850
$u = -1.71423 + 0.26922I$ $a = 0.105003 - 1.399260I$ $b = 0.34011 + 1.96867I$	$-13.7038 + 7.6996I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.71423 - 0.26922I$ $a = 0.105003 + 1.399260I$ $b = 0.34011 - 1.96867I$	$-13.7038 - 7.6996I$	0
$u = 1.71822 + 0.31095I$ $a = -0.469943 - 1.223830I$ $b = -0.06244 + 1.83419I$	$-13.63590 + 0.50051I$	0
$u = 1.71822 - 0.31095I$ $a = -0.469943 + 1.223830I$ $b = -0.06244 - 1.83419I$	$-13.63590 - 0.50051I$	0
$u = -1.74355 + 0.15186I$ $a = 0.014975 - 1.244930I$ $b = 1.07725 + 2.72182I$	$-10.90540 + 1.31562I$	0
$u = -1.74355 - 0.15186I$ $a = 0.014975 + 1.244930I$ $b = 1.07725 - 2.72182I$	$-10.90540 - 1.31562I$	0
$u = -0.01973 + 1.82329I$ $a = 0.0829691 + 0.0828182I$ $b = -0.11557 - 1.98219I$	$-16.1286 + 4.0950I$	0
$u = -0.01973 - 1.82329I$ $a = 0.0829691 - 0.0828182I$ $b = -0.11557 + 1.98219I$	$-16.1286 - 4.0950I$	0
$u = 1.85359 + 0.31631I$ $a = -0.231341 - 1.229070I$ $b = -0.48186 + 1.53845I$	$-12.71500 - 5.35446I$	0
$u = 1.85359 - 0.31631I$ $a = -0.231341 + 1.229070I$ $b = -0.48186 - 1.53845I$	$-12.71500 + 5.35446I$	0
$u = 1.72228 + 0.86852I$ $a = 0.576188 + 1.082400I$ $b = 0.76478 - 2.07350I$	$18.1726 - 13.4286I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.72228 - 0.86852I$ $a = 0.576188 - 1.082400I$ $b = 0.76478 + 2.07350I$	$18.1726 + 13.4286I$	0
$u = -1.71660 + 0.90954I$ $a = -0.667196 + 0.794326I$ $b = -0.51034 - 1.64958I$	$18.3538 + 5.3451I$	0
$u = -1.71660 - 0.90954I$ $a = -0.667196 - 0.794326I$ $b = -0.51034 + 1.64958I$	$18.3538 - 5.3451I$	0
$u = 1.95923$ $a = -0.601374$ $b = -0.892648$	-15.4063	0

II. $\boldsymbol{I_2^u = \langle -2u^7 + u^6 + \cdots + b - 4,\ 6u^7 - 2u^6 + \cdots + a + 9,\ u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -6u^7 + 2u^6 + 8u^5 - 7u^4 - 11u^3 + 5u^2 + 4u - 9 \\ 2u^7 - u^6 - 3u^5 + 3u^4 + 4u^3 - 3u^2 - 2u + 4 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^4 - u^2 + 1 \\ u^4 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} -6u^7 + 2u^6 + 8u^5 - 7u^4 - 11u^3 + 6u^2 + 4u - 10 \\ 2u^7 - u^6 - 3u^5 + 3u^4 + 4u^3 - 2u^2 - 2u + 4 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -6u^7 + 2u^6 + 8u^5 - 7u^4 - 11u^3 + 5u^2 + 4u - 9 \\ 2u^7 - u^6 - 3u^5 + 3u^4 + 4u^3 - 3u^2 - 2u + 4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -44u^7 + 15u^6 + 58u^5 - 53u^4 - 78u^3 + 42u^2 + 28u - 85$

(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	$u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1$
c_8	$u^8 + 3u^7 + 7u^6 + 10u^5 + 11u^4 + 10u^3 + 6u^2 + 4u + 1$
c_9	$u^8 + u^7 - 3u^6 - 2u^5 + 3u^4 + 2u - 1$
c_{10}	$u^8 + u^7 - u^6 - 2u^5 + u^4 + 2u^3 - 2u - 1$
c_{11}, c_{12}	$u^8 - u^7 - 3u^6 + 2u^5 + 3u^4 - 2u - 1$

(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_8	$y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1$
c_7, c_{10}	$y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1$
c_9, c_{11}, c_{12}	$y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.570868 + 0.730671I$ $a = 1.194470 - 0.635084I$ $b = -0.281371 - 1.128550I$	$-2.68559 + 1.13123I$	$-12.74421 + 0.55338I$
$u = 0.570868 - 0.730671I$ $a = 1.194470 + 0.635084I$ $b = -0.281371 + 1.128550I$	$-2.68559 - 1.13123I$	$-12.74421 - 0.55338I$
$u = -0.855237 + 0.665892I$ $a = 0.637416 - 0.344390I$ $b = 0.208670 + 0.825203I$	$0.51448 + 2.57849I$	$-9.60894 - 4.72239I$
$u = -0.855237 - 0.665892I$ $a = 0.637416 + 0.344390I$ $b = 0.208670 - 0.825203I$	$0.51448 - 2.57849I$	$-9.60894 + 4.72239I$
$u = -1.09818$ $a = -0.687555$ $b = 0.829189$	-8.14766	-20.4520
$u = 1.031810 + 0.655470I$ $a = 0.286111 + 0.344558I$ $b = 0.284386 - 0.605794I$	$-4.02461 - 6.44354I$	$-12.4754 + 9.9976I$
$u = 1.031810 - 0.655470I$ $a = 0.286111 - 0.344558I$ $b = 0.284386 + 0.605794I$	$-4.02461 + 6.44354I$	$-12.4754 - 9.9976I$
$u = 0.603304$ $a = -7.54843$ $b = 2.74744$	-2.48997	-72.8910

III.

$\boldsymbol{I_1^v = \langle a,\ -16v^4 - 47v^3 - 36v^2 + 29b - 104v + 5,\ v^5 + 3v^4 + 3v^3 + 8v^2 + v + 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ 0.551724v^4 + 1.62069v^3 + \cdots + 3.58621v - 0.172414 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ -0.344828v^4 - 1.13793v^3 + \cdots - 3.24138v - 1.51724 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.344828v^4 - 1.13793v^3 + \cdots - 3.24138v - 0.517241 \\ -0.344828v^4 - 1.13793v^3 + \cdots - 3.24138v - 1.51724 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.655172v^4 + 1.86207v^3 + \cdots + 4.75862v + 0.482759 \\ v^4 + 3v^3 + 3v^2 + 8v + 1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.655172v^4 - 1.86207v^3 + \cdots - 3.75862v - 0.482759 \\ -v^4 - 3v^3 - 3v^2 - 8v - 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.655172v^4 - 1.86207v^3 + \cdots - 4.75862v - 0.482759 \\ -0.137931v^4 - 0.655172v^3 + \cdots - 1.89655v - 2.20690 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.655172v^4 - 1.86207v^3 + \cdots - 4.75862v - 0.482759 \\ -v^4 - 3v^3 - 3v^2 - 8v - 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.551724v^4 + 1.62069v^3 + \cdots + 3.58621v - 0.172414 \\ 0.0344828v^4 + 0.413793v^3 + \cdots + 0.724138v + 1.55172 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{65}{29}v^4 + \frac{142}{29}v^3 + \frac{81}{29}v^2 + \frac{437}{29}v - \frac{613}{29}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^5 - 9y^4 + 32y^3 - 35y^2 - 5y - 1$
c_2, c_4	$y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1$
c_3, c_6	$y^5 + 3y^4 + 4y^3 + y^2 - y - 1$
c_5, c_8	$y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1$
c_7, c_{10}	y^5
c_9, c_{11}, c_{12}	$(y-1)^5$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -0.01014 + 1.59703I$ $a = 0$ $b = 0.339110 - 0.822375I$	$-1.97403 - 1.53058I$	$-13.4575 + 4.4032I$
$v = -0.01014 - 1.59703I$ $a = 0$ $b = 0.339110 + 0.822375I$	$-1.97403 + 1.53058I$	$-13.4575 - 4.4032I$
$v = -0.043806 + 0.365575I$ $a = 0$ $b = -0.455697 + 1.200150I$	$-7.51750 - 4.40083I$	$-22.0438 + 5.2094I$
$v = -0.043806 - 0.365575I$ $a = 0$ $b = -0.455697 - 1.200150I$	$-7.51750 + 4.40083I$	$-22.0438 - 5.2094I$
$v = -2.89210$ $a = 0$ $b = -0.766826$	-4.04602	-2.99730

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^8)(u^5-5u^4+\cdots-u-1)(u^{34}+50u^{33}+\cdots+7022u+1)$
c_2	$((u-1)^8)(u^5+u^4+\cdots+u-1)(u^{34}-10u^{33}+\cdots-94u+1)$
c_3	$u^8(u^5-u^4+\cdots+u-1)(u^{34}+6u^{33}+\cdots+1408u+256)$
c_4	$((u+1)^8)(u^5-u^4+\cdots+u+1)(u^{34}-10u^{33}+\cdots-94u+1)$
c_5	$(u^5-3u^4+4u^3-u^2-u+1)$ $\cdot(u^8-3u^7+7u^6-10u^5+11u^4-10u^3+6u^2-4u+1)$ $\cdot(u^{34}-3u^{33}+\cdots+2u-1)$
c_6	$u^8(u^5+u^4+\cdots+u+1)(u^{34}+6u^{33}+\cdots+1408u+256)$
c_7	$u^5(u^8-u^7+\cdots+2u-1)(u^{34}+2u^{33}+\cdots-160u-32)$
c_8	$(u^5+3u^4+4u^3+u^2-u-1)$ $\cdot(u^8+3u^7+7u^6+10u^5+11u^4+10u^3+6u^2+4u+1)$ $\cdot(u^{34}-3u^{33}+\cdots+2u-1)$
c_9	$((u-1)^5)(u^8+u^7+\cdots+2u-1)(u^{34}-7u^{33}+\cdots+2u+1)$
c_{10}	$u^5(u^8+u^7+\cdots-2u-1)(u^{34}+2u^{33}+\cdots-160u-32)$
c_{11}, c_{12}	$((u+1)^5)(u^8-u^7+\cdots-2u-1)(u^{34}-7u^{33}+\cdots+2u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^8(y^5-9y^4+32y^3-35y^2-5y-1)$ $\cdot(y^{34}-122y^{33}+\cdots-49242950y+1)$
c_2, c_4	$((y-1)^8)(y^5-5y^4+\cdots-y-1)(y^{34}-50y^{33}+\cdots-7022y+1)$
c_3, c_6	$y^8(y^5+3y^4+\cdots-y-1)(y^{34}+54y^{33}+\cdots-5357568y+65536)$
c_5, c_8	$(y^5-y^4+8y^3-3y^2+3y-1)$ $\cdot(y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1)$ $\cdot(y^{34}-y^{33}+\cdots-14y+1)$
c_7, c_{10}	$y^5(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot(y^{34}-36y^{33}+\cdots-3584y+1024)$
c_9, c_{11}, c_{12}	$(y-1)^5(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot(y^{34}-41y^{33}+\cdots-152y+1)$