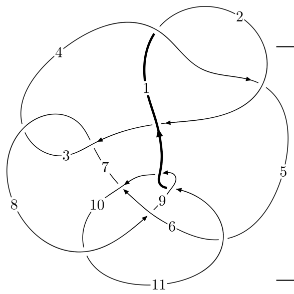
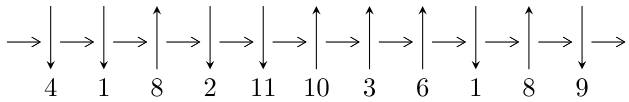
$11n_{45}$ ($K11n_{45}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle b+u,\ a-u-2,\ u^{12}+5u^{11}+9u^{10}-21u^8-22u^7+10u^6+26u^5+4u^4-11u^3-3u^2+2u+1\rangle$$
$$I_2^u = \langle b+1,\ u^5+u^4-u^3-2u^2+a+1,\ u^6+u^5-u^4-2u^3+u+1\rangle$$
$$I_3^u = \langle b^6-b^5-b^4+2b^3-b+1,\ a-1,\ u-1\rangle$$
$$\begin{aligned} I_4^u = \langle &-u^{11}-2u^{10}-6u^9-u^8-7u^7+15u^6-14u^5+28u^4-50u^3+41u^2+32b-66u+31,\\ &u^{11}+3u^{10}+8u^9+7u^8+8u^7-8u^6-u^5-14u^4+22u^3+9u^2+a+25u+3,\\ &u^{12}+3u^{11}+8u^{10}+7u^9+8u^8-8u^7-u^6-14u^5+22u^4+9u^3+25u^2+3u+1\rangle \end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 36 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. $I_1^u = \langle b+u,\ a-u-2,\ u^{12}+5u^{11}+\cdots+2u+1\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u+2\\-u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}2u+2\\-u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}u^2+2u+1\\-u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u^7+4u^6+6u^5+2u^4-4u^3-4u^2-2u\\-u^7-2u^6-u^5+2u^4+u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-2u^9-6u^8-3u^7+12u^6+14u^5-6u^4-12u^3+2u\\u^9+2u^8-u^7-6u^6-u^5+6u^4-2u^2+u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u^{10}+4u^9+5u^8-4u^7-14u^6-6u^5+11u^4+8u^3-3u^2-2u+1\\-u^{11}-5u^{10}+\cdots-2u-1\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$

(ii) Obstruction class $=-1$

(iii) Cusp Shapes $=-4u^{11}-16u^{10}-24u^9+24u^7-32u^5+16u^4+36u^3-16u+2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_9 c_{11}	$u^{12} - 5u^{11} + \cdots - 2u + 1$
c_2	$u^{12} + 7u^{11} + \cdots + 10u + 1$
c_3, c_7, c_{10}	$u^{12} + u^{11} + \cdots + 2u + 1$
c_5	$u^{12} - 3u^{11} + \cdots - 14u + 4$
c_6	$u^{12} - u^{11} + \cdots + 44u + 23$
c_8	$u^{12} + u^{11} + u^{10} + 5u^8 - 4u^6 - 8u^5 + 6u^4 + 3u^3 + 3u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_9 c_{11}	$y^{12} - 7y^{11} + \cdots - 10y + 1$
c_2	$y^{12} + 29y^{11} + \cdots + 22y + 1$
c_3, c_7, c_{10}	$y^{12} - 15y^{11} + \cdots - 2y + 1$
c_5	$y^{12} + 5y^{11} + \cdots + 68y + 16$
c_6	$y^{12} - 23y^{11} + \cdots - 4098y + 529$
c_8	$y^{12} + y^{11} + \cdots + 6y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.017000 + 0.101771I$ $a = 3.01700 + 0.10177I$ $b = -1.017000 - 0.101771I$	$-3.52730 - 0.57280I$	$-2.7091 - 26.6989I$
$u = 1.017000 - 0.101771I$ $a = 3.01700 - 0.10177I$ $b = -1.017000 + 0.101771I$	$-3.52730 + 0.57280I$	$-2.7091 + 26.6989I$
$u = -0.997809 + 0.382742I$ $a = 1.002190 + 0.382742I$ $b = 0.997809 - 0.382742I$	$-1.70690 + 6.65526I$	$-0.69156 - 12.28500I$
$u = -0.997809 - 0.382742I$ $a = 1.002190 - 0.382742I$ $b = 0.997809 + 0.382742I$	$-1.70690 - 6.65526I$	$-0.69156 + 12.28500I$
$u = 0.568808 + 0.252332I$ $a = 2.56881 + 0.25233I$ $b = -0.568808 - 0.252332I$	$-1.61529 - 1.35793I$	$-3.64822 + 4.51645I$
$u = 0.568808 - 0.252332I$ $a = 2.56881 - 0.25233I$ $b = -0.568808 + 0.252332I$	$-1.61529 + 1.35793I$	$-3.64822 - 4.51645I$
$u = -0.417930 + 0.278210I$ $a = 1.58207 + 0.27821I$ $b = 0.417930 - 0.278210I$	$1.46216 - 0.16286I$	$7.96188 - 1.03516I$
$u = -0.417930 - 0.278210I$ $a = 1.58207 - 0.27821I$ $b = 0.417930 + 0.278210I$	$1.46216 + 0.16286I$	$7.96188 + 1.03516I$
$u = -1.29679 + 1.06566I$ $a = 0.703205 + 1.065660I$ $b = 1.29679 - 1.06566I$	$12.72390 + 5.46645I$	$-0.22295 - 2.11548I$
$u = -1.29679 - 1.06566I$ $a = 0.703205 - 1.065660I$ $b = 1.29679 + 1.06566I$	$12.72390 - 5.46645I$	$-0.22295 + 2.11548I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.37328 + 1.07803I$ $a = 0.626724 + 1.078030I$ $b = 1.37328 - 1.07803I$	$12.4026 + 12.7511I$	$-0.69002 - 5.94531I$
$u = -1.37328 - 1.07803I$ $a = 0.626724 - 1.078030I$ $b = 1.37328 + 1.07803I$	$12.4026 - 12.7511I$	$-0.69002 + 5.94531I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3u^5+7u^4+u^3-6u^2-5u-1$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = 0.917982 - 0.270708I$ $b = -1.00000$	$-3.53554 - 0.92430I$	$-6.82874 + 7.13914I$
$u = 1.002190 - 0.295542I$ $a = 0.917982 + 0.270708I$ $b = -1.00000$	$-3.53554 + 0.92430I$	$-6.82874 - 7.13914I$
$u = -0.428243 + 0.664531I$ $a = -0.685196 - 1.063260I$ $b = -1.00000$	$0.245672 - 0.924305I$	$1.12292 + 1.33143I$
$u = -0.428243 - 0.664531I$ $a = -0.685196 + 1.063260I$ $b = -1.00000$	$0.245672 + 0.924305I$	$1.12292 - 1.33143I$
$u = -1.073950 + 0.558752I$ $a = -0.732786 - 0.381252I$ $b = -1.00000$	$-1.64493 + 5.69302I$	$-0.29418 - 2.69056I$
$u = -1.073950 - 0.558752I$ $a = -0.732786 + 0.381252I$ $b = -1.00000$	$-1.64493 - 5.69302I$	$-0.29418 + 2.69056I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3b^5 + 7b^4 - b^3 - 6b^2 + 5b - 1$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 1.00000$ $b = -1.002190 + 0.295542I$	$-3.53554 + 0.92430I$	$-6.82874 - 7.13914I$
$u = 1.00000$ $a = 1.00000$ $b = -1.002190 - 0.295542I$	$-3.53554 - 0.92430I$	$-6.82874 + 7.13914I$
$u = 1.00000$ $a = 1.00000$ $b = 0.428243 + 0.664531I$	$0.245672 + 0.924305I$	$1.12292 - 1.33143I$
$u = 1.00000$ $a = 1.00000$ $b = 0.428243 - 0.664531I$	$0.245672 - 0.924305I$	$1.12292 + 1.33143I$
$u = 1.00000$ $a = 1.00000$ $b = 1.073950 + 0.558752I$	$-1.64493 - 5.69302I$	$-0.29418 + 2.69056I$
$u = 1.00000$ $a = 1.00000$ $b = 1.073950 - 0.558752I$	$-1.64493 + 5.69302I$	$-0.29418 - 2.69056I$

IV.

$\boldsymbol{I_4^u = \langle -u^{11}-2u^{10}+\cdots+32b+31,\ u^{11}+3u^{10}+\cdots+a+3,\ u^{12}+3u^{11}+\cdots+3u+1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$

$$a_4 = \begin{pmatrix}0\\u\end{pmatrix}$$

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

$$a_5 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-u^{11}-3u^{10}+\cdots-25u-3\\0.0312500u^{11}+0.0625000u^{10}+\cdots+2.06250u-0.968750\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-1.03125u^{11}-3.06250u^{10}+\cdots-27.0625u-2.03125\\0.0312500u^{11}+0.0625000u^{10}+\cdots+2.06250u-0.968750\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.968750u^{11}-2.93750u^{10}+\cdots-22.9375u-3.96875\\\frac{7}{32}u^{11}+\frac{1}{2}u^{10}+\cdots+\frac{9}{2}u-\frac{23}{32}\end{pmatrix}$$

$$a_6 = \begin{pmatrix}0.531250u^{11}+1.75000u^{10}+\cdots+13.7500u+5.09375\\-0.156250u^{11}-0.562500u^{10}+\cdots-5.31250u-0.0312500\end{pmatrix}$$

$$a_7 = \begin{pmatrix}\frac{1}{4}u^{10}+\frac{3}{2}u^9+\cdots+\frac{35}{4}u+2\\0.218750u^{11}+0.437500u^{10}+\cdots-1.81250u+0.218750\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-\frac{1}{4}u^{11}-\frac{3}{4}u^{10}+\cdots-\frac{29}{4}u-\frac{9}{4}\\0.0312500u^{11}+0.0625000u^{10}+\cdots+1.81250u-0.218750\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -\frac{3}{16}u^{11}-\frac{11}{16}u^{10}-\frac{33}{16}u^9-3u^8-\frac{55}{16}u^7+\frac{1}{2}u^6+\frac{11}{4}u^5+\frac{21}{4}u^4-\frac{21}{8}u^3-\frac{83}{16}u^2-\frac{183}{16}u-\frac{23}{8}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_9 c_{11}	$u^{12} - 3u^{11} + \cdots - 3u + 1$
c_2	$u^{12} - 7u^{11} + \cdots - 41u + 1$
c_3, c_7, c_{10}	$u^{12} + u^{11} + \cdots + 320u + 64$
c_5	$u^{12} - 2u^{11} + \cdots + 144u + 121$
c_6	$u^{12} - 14u^{10} + \cdots + 120u + 77$
c_8	$(u^6 + u^5 + u^4 + 2u^2 + u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_9 c_{11}	$y^{12} + 7y^{11} + \cdots + 41y + 1$
c_2	$y^{12} + 27y^{11} + \cdots - 451y + 1$
c_3, c_7, c_{10}	$y^{12} - 27y^{11} + \cdots - 12288y + 4096$
c_5	$y^{12} + 24y^{11} + \cdots + 28148y + 14641$
c_6	$y^{12} - 28y^{11} + \cdots + 53360y + 5929$
c_8	$(y^6 + y^5 + 5y^4 + 4y^3 + 6y^2 + 3y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.282006 + 0.991713I$ $a = -0.265287 - 0.932918I$ $b = 0.042043 + 1.323160I$	$2.99789 + 2.65597I$	$1.54637 - 3.55162I$
$u = -0.282006 - 0.991713I$ $a = -0.265287 + 0.932918I$ $b = 0.042043 - 1.323160I$	$2.99789 - 2.65597I$	$1.54637 + 3.55162I$
$u = 1.032840 + 0.430283I$ $a = 0.825019 - 0.343706I$ $b = 0.058341 + 0.199318I$	$-1.90302 - 1.10871I$	$-2.03402 + 2.13465I$
$u = 1.032840 - 0.430283I$ $a = 0.825019 + 0.343706I$ $b = 0.058341 - 0.199318I$	$-1.90302 + 1.10871I$	$-2.03402 - 2.13465I$
$u = -0.042043 + 1.323160I$ $a = -0.023990 - 0.755006I$ $b = 0.282006 + 0.991713I$	$2.99789 - 2.65597I$	$1.54637 + 3.55162I$
$u = -0.042043 - 1.323160I$ $a = -0.023990 + 0.755006I$ $b = 0.282006 - 0.991713I$	$2.99789 + 2.65597I$	$1.54637 - 3.55162I$
$u = -1.07187 + 1.35065I$ $a = -0.360515 - 0.454280I$ $b = 1.07857 + 1.47659I$	$13.70950 + 3.42721I$	$0.48765 - 2.36550I$
$u = -1.07187 - 1.35065I$ $a = -0.360515 + 0.454280I$ $b = 1.07857 - 1.47659I$	$13.70950 - 3.42721I$	$0.48765 + 2.36550I$
$u = -0.058341 + 0.199318I$ $a = -1.35265 - 4.62119I$ $b = -1.032840 + 0.430283I$	$-1.90302 + 1.10871I$	$-2.03402 - 2.13465I$
$u = -0.058341 - 0.199318I$ $a = -1.35265 + 4.62119I$ $b = -1.032840 - 0.430283I$	$-1.90302 - 1.10871I$	$-2.03402 + 2.13465I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.07857 + 1.47659I$ $a = -0.322576 - 0.441612I$ $b = \quad 1.07187 + 1.35065I$	$13.70950 - 3.42721I$	$0.48765 + 2.36550I$
$u = -1.07857 - 1.47659I$ $a = -0.322576 + 0.441612I$ $b = \quad 1.07187 - 1.35065I$	$13.70950 + 3.42721I$	$0.48765 - 2.36550I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_9	$((u-1)^6)(u^6+u^5+\cdots+u+1)(u^{12}-5u^{11}+\cdots-2u+1)$ $\cdot(u^{12}-3u^{11}+\cdots-3u+1)$
c_2	$(u+1)^6(u^6+3u^5+5u^4+4u^3+2u^2+u+1)$ $\cdot(u^{12}-7u^{11}+\cdots-41u+1)(u^{12}+7u^{11}+\cdots+10u+1)$
c_3	$u^6(u^6-u^5+\cdots-u+1)(u^{12}+u^{11}+\cdots+320u+64)$ $\cdot(u^{12}+u^{11}+\cdots+2u+1)$
c_4, c_{11}	$((u+1)^6)(u^6-u^5+\cdots-u+1)(u^{12}-5u^{11}+\cdots-2u+1)$ $\cdot(u^{12}-3u^{11}+\cdots-3u+1)$
c_5	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)(u^6+u^5+2u^4+4u^3+5u^2+3u+1)$ $\cdot(u^{12}-3u^{11}+\cdots-14u+4)(u^{12}-2u^{11}+\cdots+144u+121)$
c_6	$(u^6-u^5-u^4+2u^3-u+1)(u^6+u^5+2u^4+4u^3+5u^2+3u+1)$ $\cdot(u^{12}-14u^{10}+\cdots+120u+77)(u^{12}-u^{11}+\cdots+44u+23)$
c_7, c_{10}	$u^6(u^6+u^5+\cdots+u+1)(u^{12}+u^{11}+\cdots+320u+64)$ $\cdot(u^{12}+u^{11}+\cdots+2u+1)$
c_8	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2(u^6+u^5+u^4+2u^2+u+1)^2$ $\cdot(u^{12}+u^{11}+u^{10}+5u^8-4u^6-8u^5+6u^4+3u^3+3u^2+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_9 c_{11}	$(y-1)^6(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{12}-7y^{11}+\cdots-10y+1)(y^{12}+7y^{11}+\cdots+41y+1)$
c_2	$((y-1)^6)(y^6+y^5+\cdots+3y+1)(y^{12}+27y^{11}+\cdots-451y+1)$ $\cdot(y^{12}+29y^{11}+\cdots+22y+1)$
c_3, c_7, c_{10}	$y^6(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{12}-27y^{11}+\cdots-12288y+4096)(y^{12}-15y^{11}+\cdots-2y+1)$
c_5	$(y^6+y^5+5y^4+6y^2+3y+1)(y^6+3y^5+6y^4+5y^2+y+1)$ $\cdot(y^{12}+5y^{11}+\cdots+68y+16)(y^{12}+24y^{11}+\cdots+28148y+14641)$
c_6	$(y^6-3y^5+5y^4-4y^3+2y^2-y+1)(y^6+3y^5+6y^4+5y^2+y+1)$ $\cdot(y^{12}-28y^{11}+\cdots+53360y+5929)$ $\cdot(y^{12}-23y^{11}+\cdots-4098y+529)$
c_8	$(y^6+y^5+5y^4+6y^2+3y+1)^2(y^6+y^5+5y^4+4y^3+6y^2+3y+1)^2$ $\cdot(y^{12}+y^{11}+\cdots+6y+1)$