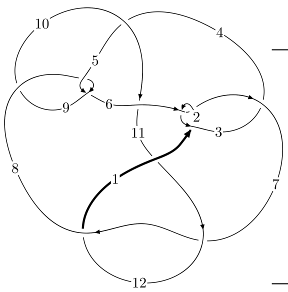
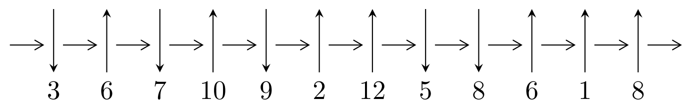
$12n_{0300}$ ($K12n_{0300}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-1.12945 \times 10^{24} u^{51} - 1.35993 \times 10^{23} u^{50} + \cdots + 4.17532 \times 10^{23} b + 3.14183 \times 10^{24}, \\
&6.04213 \times 10^{24} u^{51} - 1.00196 \times 10^{24} u^{50} + \cdots + 8.35063 \times 10^{23} a - 2.70702 \times 10^{25},\ u^{52} - u^{51} + \cdots - 4u + 4 \rangle \\
I_2^u = \langle &b - 1,\ u^3 a + 4u^2 a + 2u^3 + 2a^2 + 5u^2 - 2u - 6,\ u^4 - 2u^2 + 2 \rangle
\end{aligned}$$

$$I_1^v = \langle a,\ b + 1,\ v^2 - v + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 62 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.

$$\boldsymbol{I_1^u = \langle -1.13\times 10^{24}u^{51} - 1.36\times 10^{23}u^{50} + \cdots + 4.18\times 10^{23}b + 3.14\times 10^{24},\ 6.04\times 10^{24}u^{51} - 1.00\times 10^{24}u^{50} + \cdots + 8.35\times 10^{23}a - 2.71\times 10^{25},\ u^{52} - u^{51} + \cdots - 4u + 4\rangle}$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -7.23554u^{51} + 1.19986u^{50} + \cdots + 2.91779u + 32.4170 \\ 2.70507u^{51} + 0.325706u^{50} + \cdots + 4.65999u - 7.52477 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -4.53046u^{51} + 1.52557u^{50} + \cdots + 7.57778u + 24.8922 \\ 2.70507u^{51} + 0.325706u^{50} + \cdots + 4.65999u - 7.52477 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^5 + 2u^3 - u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -1.40746u^{51} + 1.66161u^{50} + \cdots + 10.2665u + 13.5363 \\ -2.60824u^{51} + 0.294345u^{50} + \cdots + 0.650880u + 11.7241 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -10.3091u^{51} + 0.907634u^{50} + \cdots - 1.48074u + 45.2097 \\ 1.04491u^{51} + 0.213681u^{50} + \cdots + 3.29442u - 2.54491 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -8.56753u^{51} + 0.985809u^{50} + \cdots - 0.320727u + 38.1282 \\ 0.924923u^{51} + 0.0989994u^{50} + \cdots + 2.44711u - 2.74222 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^6 - u^4 + 1 \\ u^8 - 2u^6 + 2u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{7495174754000009275308222}{2087658123774231848304449}u^{51} + \frac{2320408774170155316719\,18}{2087658123774231848304449}u^{50} + \cdots - \frac{1928089742816836316162\,26}{2087658123774231848304449}u + \frac{4448015067704942886567602}{2087658123774231848304449}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{52} + 32u^{51} + \cdots - 74u + 25$
c_2, c_6	$u^{52} - 2u^{51} + \cdots - 8u + 5$
c_3	$u^{52} + 2u^{51} + \cdots - 28u + 5$
c_4	$u^{52} + 3u^{51} + \cdots + 460u + 76$
c_5, c_8	$u^{52} + u^{51} + \cdots + 4u + 4$
c_7, c_{12}	$u^{52} - 3u^{51} + \cdots + 9u + 1$
c_9	$u^{52} + 31u^{51} + \cdots + 80u + 16$
c_{10}	$u^{52} - u^{51} + \cdots + 1725404u + 2511892$
c_{11}	$u^{52} - 13u^{51} + \cdots - 3u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} - 16y^{51} + \cdots - 48126y + 625$
c_2, c_6	$y^{52} + 32y^{51} + \cdots - 74y + 25$
c_3	$y^{52} - 64y^{51} + \cdots + 326y + 25$
c_4	$y^{52} + 61y^{51} + \cdots - 8528y + 5776$
c_5, c_8	$y^{52} - 31y^{51} + \cdots - 80y + 16$
c_7, c_{12}	$y^{52} - 13y^{51} + \cdots - 3y + 1$
c_9	$y^{52} - 15y^{51} + \cdots - 3328y + 256$
c_{10}	$y^{52} + 121y^{51} + \cdots - 158315434513616y + 6309601419664$
c_{11}	$y^{52} + 67y^{51} + \cdots + 1413y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.005040+0.945584I$ $a=-1.120450-0.773586I$ $b=\ \ 0.86363+1.15342I$	$-10.20250-1.40325I$	$-0.753210+0.700768I$
$u=-0.005040-0.945584I$ $a=-1.120450+0.773586I$ $b=\ \ 0.86363-1.15342I$	$-10.20250+1.40325I$	$-0.753210-0.700768I$
$u=\ \ 0.107775+0.930905I$ $a=-1.78820-0.36766I$ $b=\ \ 1.15916+0.95665I$	$-9.20690+9.05102I$	$0.53002-4.91799I$
$u=\ \ 0.107775-0.930905I$ $a=-1.78820+0.36766I$ $b=\ \ 1.15916-0.95665I$	$-9.20690-9.05102I$	$0.53002+4.91799I$
$u=\ \ 1.037360+0.298010I$ $a=\ \ 0.005298+0.154343I$ $b=\ \ 0.189541+0.596804I$	$-1.89487-1.25455I$	$-1.66552+0.64316I$
$u=\ \ 1.037360-0.298010I$ $a=\ \ 0.005298-0.154343I$ $b=\ \ 0.189541-0.596804I$	$-1.89487+1.25455I$	$-1.66552-0.64316I$
$u=-0.860656+0.321405I$ $a=-1.10246+2.20010I$ $b=\ \ 0.964482+0.321134I$	$1.45283+3.79114I$	$3.95154-7.81429I$
$u=-0.860656-0.321405I$ $a=-1.10246-2.20010I$ $b=\ \ 0.964482-0.321134I$	$1.45283-3.79114I$	$3.95154+7.81429I$
$u=\ \ 0.890991+0.199303I$ $a=\ \ 2.09257-0.24712I$ $b=-1.210700-0.125141I$	$0.64653-3.09032I$	$-0.45726+5.33318I$
$u=\ \ 0.890991-0.199303I$ $a=\ \ 2.09257+0.24712I$ $b=-1.210700+0.125141I$	$0.64653+3.09032I$	$-0.45726-5.33318I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.056109+0.903857I$ $a=-1.370050+0.327066I$ $b=\ \ 0.983868-0.956085I$	$-5.60216-3.52882I$	$2.88518+2.10285I$
$u=-0.056109-0.903857I$ $a=-1.370050-0.327066I$ $b=\ \ 0.983868+0.956085I$	$-5.60216+3.52882I$	$2.88518-2.10285I$
$u=-0.993815+0.500766I$ $a=-1.65168+0.85430I$ $b=\ \ 0.815359+0.433581I$	$-0.20710+4.60134I$	$3.51877-6.93021I$
$u=-0.993815-0.500766I$ $a=-1.65168-0.85430I$ $b=\ \ 0.815359-0.433581I$	$-0.20710-4.60134I$	$3.51877+6.93021I$
$u=\ \ 0.824227+0.185520I$ $a=\ \ 0.19223-2.35056I$ $b=\ \ 0.870779-0.282220I$	$0.857181+1.058030I$	$0.02381+1.93865I$
$u=\ \ 0.824227-0.185520I$ $a=\ \ 0.19223+2.35056I$ $b=\ \ 0.870779+0.282220I$	$0.857181-1.058030I$	$0.02381-1.93865I$
$u=\ \ 0.448459+0.705408I$ $a=\ \ 1.35058+0.91047I$ $b=-0.593885-0.727712I$	$-1.53921+3.53715I$	$0.35654-4.05104I$
$u=\ \ 0.448459-0.705408I$ $a=\ \ 1.35058-0.91047I$ $b=-0.593885+0.727712I$	$-1.53921-3.53715I$	$0.35654+4.05104I$
$u=\ \ 1.017620+0.594178I$ $a=-1.99134-0.34195I$ $b=\ \ 0.772747-0.753613I$	$-3.15906-8.48239I$	$0.+8.84514I$
$u=\ \ 1.017620-0.594178I$ $a=-1.99134+0.34195I$ $b=\ \ 0.772747+0.753613I$	$-3.15906+8.48239I$	$0.-8.84514I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.092570 + 0.474230I$ $a = -1.086010 - 0.165719I$ $b = 0.133855 - 0.142339I$	$-2.46320 - 1.67636I$	0
$u = 1.092570 - 0.474230I$ $a = -1.086010 + 0.165719I$ $b = 0.133855 + 0.142339I$	$-2.46320 + 1.67636I$	0
$u = -1.202650 + 0.144960I$ $a = -0.033095 - 0.253143I$ $b = 0.422921 - 1.043410I$	$-6.67676 - 1.37465I$	0
$u = -1.202650 - 0.144960I$ $a = -0.033095 + 0.253143I$ $b = 0.422921 + 1.043410I$	$-6.67676 + 1.37465I$	0
$u = 0.602001 + 0.506117I$ $a = 1.058240 - 0.518986I$ $b = -0.213970 + 0.512677I$	$-0.76208 - 1.83218I$	$-0.54081 + 5.00541I$
$u = 0.602001 - 0.506117I$ $a = 1.058240 + 0.518986I$ $b = -0.213970 - 0.512677I$	$-0.76208 + 1.83218I$	$-0.54081 - 5.00541I$
$u = -1.154940 + 0.386919I$ $a = -0.205260 - 0.701723I$ $b = -0.272895 - 0.607754I$	$-3.12200 + 5.95808I$	0
$u = -1.154940 - 0.386919I$ $a = -0.205260 + 0.701723I$ $b = -0.272895 + 0.607754I$	$-3.12200 - 5.95808I$	0
$u = 1.177630 + 0.344211I$ $a = -1.000060 - 0.963724I$ $b = 1.300120 - 0.319188I$	$-3.30400 - 3.98463I$	0
$u = 1.177630 - 0.344211I$ $a = -1.000060 + 0.963724I$ $b = 1.300120 + 0.319188I$	$-3.30400 + 3.98463I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.684305 + 0.345498I$ $a = 2.21655 - 0.15101I$ $b = -1.084480 + 0.183921I$	$1.94565 - 0.69515I$	$5.57940 - 2.37743I$
$u = -0.684305 - 0.345498I$ $a = 2.21655 + 0.15101I$ $b = -1.084480 - 0.183921I$	$1.94565 + 0.69515I$	$5.57940 + 2.37743I$
$u = -1.121360 + 0.516692I$ $a = -0.85701 + 1.13115I$ $b = 1.077300 - 0.327985I$	$-2.00208 + 3.98418I$	0
$u = -1.121360 - 0.516692I$ $a = -0.85701 - 1.13115I$ $b = 1.077300 + 0.327985I$	$-2.00208 - 3.98418I$	0
$u = -0.200571 + 0.677423I$ $a = 2.15588 + 0.29190I$ $b = -1.145000 - 0.260693I$	$0.568023 + 0.563021I$	$1.46294 - 0.43596I$
$u = -0.200571 - 0.677423I$ $a = 2.15588 - 0.29190I$ $b = -1.145000 + 0.260693I$	$0.568023 - 0.563021I$	$1.46294 + 0.43596I$
$u = -0.448987 + 0.506853I$ $a = 1.66812 - 0.26657I$ $b = -0.715266 + 0.202676I$	$1.316970 - 0.435931I$	$7.52137 + 1.21169I$
$u = -0.448987 - 0.506853I$ $a = 1.66812 + 0.26657I$ $b = -0.715266 - 0.202676I$	$1.316970 + 0.435931I$	$7.52137 - 1.21169I$
$u = 1.276530 + 0.439785I$ $a = -0.254365 + 0.161558I$ $b = -0.937038 - 1.050200I$	$-9.70077 - 1.19639I$	0
$u = 1.276530 - 0.439785I$ $a = -0.254365 - 0.161558I$ $b = -0.937038 + 1.050200I$	$-9.70077 + 1.19639I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.255740 + 0.501539I$ $a = 1.35852 - 1.19157I$ $b = -1.07227 - 0.96226I$	$-9.23940 + 8.57003I$	0
$u = -1.255740 - 0.501539I$ $a = 1.35852 + 1.19157I$ $b = -1.07227 + 0.96226I$	$-9.23940 - 8.57003I$	0
$u = 1.254730 + 0.531819I$ $a = 1.66106 + 1.24516I$ $b = -1.22933 + 0.93613I$	$-12.6957 - 14.3132I$	0
$u = 1.254730 - 0.531819I$ $a = 1.66106 - 1.24516I$ $b = -1.22933 - 0.93613I$	$-12.6957 + 14.3132I$	0
$u = -1.302310 + 0.406465I$ $a = 0.040415 - 0.203783I$ $b = -1.14144 + 1.05229I$	$-13.6366 - 4.3879I$	0
$u = -1.302310 - 0.406465I$ $a = 0.040415 + 0.203783I$ $b = -1.14144 - 1.05229I$	$-13.6366 + 4.3879I$	0
$u = -1.289050 + 0.482994I$ $a = -0.450643 - 0.411802I$ $b = -0.79762 + 1.24088I$	$-14.1610 + 6.4835I$	0
$u = -1.289050 - 0.482994I$ $a = -0.450643 + 0.411802I$ $b = -0.79762 - 1.24088I$	$-14.1610 - 6.4835I$	0
$u = 1.292070 + 0.476980I$ $a = 1.24277 + 0.80176I$ $b = -0.97197 + 1.17126I$	$-14.2080 - 3.6508I$	0
$u = 1.292070 - 0.476980I$ $a = 1.24277 - 0.80176I$ $b = -0.97197 - 1.17126I$	$-14.2080 + 3.6508I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.053574+0.599232I$		
$a=$	$0.868407-0.120577I$	$0.20589-2.30089I$	$-0.01971+3.72749I$
$b=$	$0.332102-0.211608I$		
$u=$	$0.053574-0.599232I$		
$a=$	$0.868407+0.120577I$	$0.20589+2.30089I$	$-0.01971-3.72749I$
$b=$	$0.332102+0.211608I$		

II. $\boldsymbol{I^u_2 = \langle b-1,\ u^3a+4u^2a+2u^3+2a^2+5u^2-2u-6,\ u^4-2u^2+2\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u^3a+4u^3-4au+4u^2-8u-4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.098680 + 0.455090I$ $a = -0.48809 - 1.66713I$ $b = 1.00000$	$-0.82247 - 5.69375I$	$2.00000 + 7.46410I$
$u = 1.098680 + 0.455090I$ $a = -1.83370 - 1.10976I$ $b = 1.00000$	$-0.82247 - 1.63398I$	$2.00000 + 0.53590I$
$u = 1.098680 - 0.455090I$ $a = -0.48809 + 1.66713I$ $b = 1.00000$	$-0.82247 + 5.69375I$	$2.00000 - 7.46410I$
$u = 1.098680 - 0.455090I$ $a = -1.83370 + 1.10976I$ $b = 1.00000$	$-0.82247 + 1.63398I$	$2.00000 - 0.53590I$
$u = -1.098680 + 0.455090I$ $a = -0.166298 + 0.890241I$ $b = 1.00000$	$-0.82247 + 1.63398I$	$2.00000 - 0.53590I$
$u = -1.098680 + 0.455090I$ $a = -1.51191 + 0.33287I$ $b = 1.00000$	$-0.82247 + 5.69375I$	$2.00000 - 7.46410I$
$u = -1.098680 - 0.455090I$ $a = -0.166298 - 0.890241I$ $b = 1.00000$	$-0.82247 - 1.63398I$	$2.00000 + 0.53590I$
$u = -1.098680 - 0.455090I$ $a = -1.51191 - 0.33287I$ $b = 1.00000$	$-0.82247 - 5.69375I$	$2.00000 + 7.46410I$

III. $\boldsymbol{I_1^v = \langle a,\ b+1,\ v^2 - v + 1\rangle}$

(i) Arc colorings

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

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

$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_6 = \begin{pmatrix} v \\ 0 \end{pmatrix}$

$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_{12} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

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

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

$a_7 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$

$a_3 = \begin{pmatrix} 0 \\ -v \end{pmatrix}$

$a_2 = \begin{pmatrix} -1 \\ -v \end{pmatrix}$

$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4v + 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 0.500000 + 0.866025I$ $a = 0$ $b = -1.00000$	$1.64493 - 2.02988I$	$6.00000 + 3.46410I$
$v = 0.500000 - 0.866025I$ $a = 0$ $b = -1.00000$	$1.64493 + 2.02988I$	$6.00000 - 3.46410I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^5)(u^{52}+32u^{51}+\cdots-74u+25)$
c_2	$((u^2-u+1)^4)(u^2+u+1)(u^{52}-2u^{51}+\cdots-8u+5)$
c_3	$(u^2-u+1)(u^2+u+1)^4(u^{52}+2u^{51}+\cdots-28u+5)$
c_4	$u^2(u^4+2u^2+2)^2(u^{52}+3u^{51}+\cdots+460u+76)$
c_5, c_8	$u^2(u^4-2u^2+2)^2(u^{52}+u^{51}+\cdots+4u+4)$
c_6	$(u^2-u+1)(u^2+u+1)^4(u^{52}-2u^{51}+\cdots-8u+5)$
c_7	$((u-1)^8)(u+1)^2(u^{52}-3u^{51}+\cdots+9u+1)$
c_9	$u^2(u^2+2u+2)^4(u^{52}+31u^{51}+\cdots+80u+16)$
c_{10}	$u^2(u^4+2u^2+2)^2(u^{52}-u^{51}+\cdots+1725404u+2511892)$
c_{11}	$((u+1)^{10})(u^{52}-13u^{51}+\cdots-3u+1)$
c_{12}	$((u-1)^2)(u+1)^8(u^{52}-3u^{51}+\cdots+9u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^5)(y^{52}-16y^{51}+\cdots-48126y+625)$
c_2, c_6	$((y^2+y+1)^5)(y^{52}+32y^{51}+\cdots-74y+25)$
c_3	$((y^2+y+1)^5)(y^{52}-64y^{51}+\cdots+326y+25)$
c_4	$y^2(y^2+2y+2)^4(y^{52}+61y^{51}+\cdots-8528y+5776)$
c_5, c_8	$y^2(y^2-2y+2)^4(y^{52}-31y^{51}+\cdots-80y+16)$
c_7, c_{12}	$((y-1)^{10})(y^{52}-13y^{51}+\cdots-3y+1)$
c_9	$y^2(y^2+4)^4(y^{52}-15y^{51}+\cdots-3328y+256)$
c_{10}	$y^2(y^2+2y+2)^4$ $\cdot\,(y^{52}+121y^{51}+\cdots-158315434513616y+6309601419664)$
c_{11}	$((y-1)^{10})(y^{52}+67y^{51}+\cdots+1413y+1)$