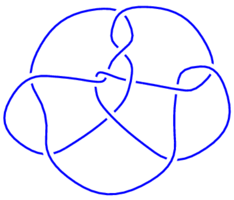
$11n_{112}$ $(K11n_{112})$



[1]

Arc Sequences

$$\rightarrow \underset{5}{\downarrow} \rightarrow \underset{1}{\downarrow} \rightarrow \underset{9}{\downarrow} \rightarrow \underset{7}{\downarrow} \rightarrow \underset{2}{\downarrow} \rightarrow \underset{10}{\uparrow} \rightarrow \underset{3}{\downarrow} \rightarrow \underset{1}{\uparrow} \rightarrow \underset{4}{\downarrow} \rightarrow \underset{6}{\uparrow} \rightarrow \underset{9}{\uparrow} \rightarrow$$

Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{3} I_i^u$$

$$\begin{aligned}
I_1^u = \langle & a^{20} + a^{19} + \cdots + 5719a + 1849, \\
& 2.52594 \times 10^{34} u - 3.61316 \times 10^{31} a^{19} + \cdots - 1.27330 \times 10^{35} a - 8.38891 \times 10^{34}, \\
& 1.79342 \times 10^{36} b + 3.13643 \times 10^{33} a^{19} + \cdots + 7.58386 \times 10^{36} a + 5.37017 \times 10^{35} \rangle \\
I_2^u = \langle & u^{11} + u^{10} - 2u^9 - 3u^8 + 3u^7 + 5u^6 - 2u^5 - 4u^4 + 2u^3 + 2u^2 - u - 1, \\
& -u^{10} - u^9 + 2u^8 + 3u^7 - 3u^6 - 5u^5 + 2u^4 + 3u^3 - 2u^2 + b - u + 1, \\
& u^{10} + u^9 - 3u^8 - 3u^7 + 5u^6 + 6u^5 - 6u^4 - 5u^3 + 5u^2 + a + 2u - 3 \rangle \\
I_3^u = \langle & u^{18} - 6u^{17} + \cdots + 10u - 4,\ 5u^{17} - 20u^{16} + \cdots + 4a + 12,\ 3u^{17} - 18u^{16} + \cdots + 2b + 10 \rangle
\end{aligned}$$

There are 3 irreducible components with 49 representations.

[1]The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I.

$\boldsymbol{I_1^u = \langle a^{20}+a^{19}+\cdots+5719a+1849,\ 2.53\times10^{34}u-3.61\times10^{31}a^{19}+\cdots-1.27\times 10^{35}a-8.39\times10^{34},\ 1.79\times10^{36}b+3.14\times10^{33}a^{19}+\cdots+7.58\times10^{36}a+5.37\times10^{35}\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\0.00143042a^{19}-0.000566296a^{18}+\cdots+5.04091a+3.32110\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\0.00166436a^{19}-0.000159221a^{18}+\cdots+7.03054a+4.09150\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-0.00166436a^{19}+0.000159221a^{18}+\cdots-7.03054a-3.09150\\0.00166436a^{19}-0.000159221a^{18}+\cdots+7.03054a+4.09150\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-0.00143042a^{19}+0.000566296a^{18}+\cdots-5.04091a-3.32110\\-0.000908272a^{19}-0.000596087a^{18}+\cdots-3.90667a-0.746953\end{pmatrix}$$
$$a_9 = \begin{pmatrix}a\\-0.00174886a^{19}+0.00161592a^{18}+\cdots-4.22872a-0.299438\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.00174886a^{19}-0.00161592a^{18}+\cdots+5.22872a+0.299438\\-0.00174886a^{19}+0.00161592a^{18}+\cdots-4.22872a-0.299438\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.000290902a^{19}-0.000873611a^{18}+\cdots-1.97545a-1.24240\\0.000365629a^{19}+0.00160533a^{18}+\cdots+4.17372a+4.02037\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-0.00128799a^{19}+0.000576919a^{18}+\cdots-3.17025a-1.80331\\0.00276611a^{19}-0.000183719a^{18}+\cdots+9.58993a+6.94920\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0.00336478a^{19}-0.00251789a^{18}+\cdots+9.70228a+4.23364\\-0.000749449a^{19}+0.00196100a^{18}+\cdots-1.79179a+0.720758\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0.00110884a^{19}-0.00208244a^{18}+\cdots+0.240374a-0.276429\\0.000899510a^{19}+0.00143267a^{18}+\cdots+4.28137a+4.61956\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0.00110884a^{19}-0.00208244a^{18}+\cdots+0.240374a-0.276429\\0.000899510a^{19}+0.00143267a^{18}+\cdots+4.28137a+4.61956\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =**unknown**

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.645200$ $a = -1.90553 - 0.26854I$ $b = 1.09670 - 1.08254I$	$-5.81699 + 2.02988I$	$-13.60884 - 3.46410I$
$u = -0.645200$ $a = -1.90553 + 0.26854I$ $b = 1.09670 + 1.08254I$	$-5.81699 - 2.02988I$	$-13.60884 + 3.46410I$
$u = 0.758138 - 0.584034I$ $a = -1.59288 - 0.14727I$ $b = 0.110691 + 1.283242I$	$-3.11500 + 0.18409I$	$-5.11432 - 0.75879I$
$u = 0.758138 + 0.584034I$ $a = -1.59288 + 0.14727I$ $b = 0.110691 - 1.283242I$	$-3.11500 - 0.18409I$	$-5.11432 + 0.75879I$
$u = -0.935538 - 0.903908I$ $a = -1.47807 - 0.67792I$ $b = 1.44900 - 0.72345I$	$6.02349 - 5.36163I$	$-4.08126 + 5.82638I$
$u = -0.935538 + 0.903908I$ $a = -1.47807 + 0.67792I$ $b = 1.44900 + 0.72345I$	$6.02349 + 5.36163I$	$-4.08126 - 5.82638I$
$u = -0.935538 - 0.903908I$ $a = -0.917729 - 0.847158I$ $b = 1.52925 + 0.42833I$	$6.02349 - 1.30186I$	$-4.08126 - 1.10182I$
$u = -0.935538 + 0.903908I$ $a = -0.917729 + 0.847158I$ $b = 1.52925 - 0.42833I$	$6.02349 + 1.30186I$	$-4.08126 + 1.10182I$
$u = 0.758138 - 0.584034I$ $a = -0.566965 - 0.314182I$ $b = 0.882926 - 0.389982I$	$-3.11500 + 0.18409I$	$-5.11432 - 0.75879I$
$u = 0.758138 + 0.584034I$ $a = -0.566965 + 0.314182I$ $b = 0.882926 + 0.389982I$	$-3.11500 - 0.18409I$	$-5.11432 + 0.75879I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.758138 + 0.584034I$ $a = -0.06960 - 1.47984I$ $b = 0.362793 - 0.374311I$	$-3.11500 - 4.24385I$	$-5.11432 + 7.68699I$
$u = 0.758138 - 0.584034I$ $a = -0.06960 + 1.47984I$ $b = 0.362793 + 0.374311I$	$-3.11500 + 4.24385I$	$-5.11432 - 7.68699I$
$u = 0.758138 + 0.584034I$ $a = 0.749890 - 0.621375I$ $b = -0.08602 + 1.68144I$	$-3.11500 - 4.24385I$	$-5.11432 + 7.68699I$
$u = 0.758138 - 0.584034I$ $a = 0.749890 + 0.621375I$ $b = -0.08602 - 1.68144I$	$-3.11500 + 4.24385I$	$-5.11432 - 7.68699I$
$u = -0.935538 + 0.903908I$ $a = 1.16701 - 1.04206I$ $b = -1.78733 - 0.41229I$	$6.02349 + 1.30186I$	$-4.08126 + 1.10182I$
$u = -0.935538 - 0.903908I$ $a = 1.16701 + 1.04206I$ $b = -1.78733 + 0.41229I$	$6.02349 - 1.30186I$	$-4.08126 - 1.10182I$
$u = -0.935538 + 0.903908I$ $a = 1.18464 - 0.79636I$ $b = -2.04795 - 0.07963I$	$6.02349 + 5.36163I$	$-4.08126 - 5.82638I$
$u = -0.935538 - 0.903908I$ $a = 1.18464 + 0.79636I$ $b = -2.04795 + 0.07963I$	$6.02349 - 5.36163I$	$-4.08126 + 5.82638I$
$u = -0.645200$ $a = 2.92924 - 1.50457I$ $b = -0.010057 - 0.799590I$	$-5.81699 + 2.02988I$	$-13.60884 - 3.46410I$
$u = -0.645200$ $a = 2.92924 + 1.50457I$ $b = -0.010057 + 0.799590I$	$-5.81699 - 2.02988I$	$-13.60884 + 3.46410I$

II.

$$\boldsymbol{I_2^u = \langle u^{11} + u^{10} + \cdots - u - 1,\ -u^{10} - u^9 + \cdots + b + 1,\ u^{10} + u^9 + \cdots + a - 3 \rangle}$$

(i) Arc colorings

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

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

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

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

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

$$a_9 = \begin{pmatrix} -u^{10} - u^9 + 3u^8 + 3u^7 - 5u^6 - 6u^5 + 6u^4 + 5u^3 - 5u^2 - 2u + 3 \\ u^{10} + u^9 - 2u^8 - 3u^7 + 3u^6 + 5u^5 - 2u^4 - 3u^3 + 2u^2 + u - 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -2u^{10} - 2u^9 + 5u^8 + 6u^7 - 8u^6 - 11u^5 + 8u^4 + 8u^3 - 7u^2 - 3u + 4 \\ u^{10} + u^9 - 2u^8 - 3u^7 + 3u^6 + 5u^5 - 2u^4 - 3u^3 + 2u^2 + u - 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u^{10} - u^9 + 3u^8 + 3u^7 - 5u^6 - 6u^5 + 5u^4 + 5u^3 - 4u^2 - 2u + 2 \\ u^9 - 2u^7 - u^6 + 4u^5 + 2u^4 - 3u^3 - u^2 + 2u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2u^{10} + u^9 - 5u^8 - 4u^7 + 9u^6 + 7u^5 - 9u^4 - 6u^3 + 7u^2 + 2u - 3 \\ -u^{10} - u^9 + 2u^8 + 3u^7 - 3u^6 - 5u^5 + 2u^4 + 4u^3 - u^2 - u + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 2u^{10} + u^9 - 5u^8 - 3u^7 + 9u^6 + 5u^5 - 9u^4 - 3u^3 + 8u^2 - 2 \\ -u^{10} + 3u^8 + u^7 - 5u^6 - 2u^5 + 5u^4 + 2u^3 - 3u^2 + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{10} - 3u^8 - u^7 + 6u^6 + 2u^5 - 6u^4 - 2u^3 + 5u^2 - 1 \\ u^8 + u^7 - u^6 - 2u^5 + u^4 + 3u^3 - u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{10} - 3u^8 - u^7 + 6u^6 + 2u^5 - 6u^4 - 2u^3 + 5u^2 - 1 \\ u^8 + u^7 - u^6 - 2u^5 + u^4 + 3u^3 - u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.050461-0.434817I$ $a=-0.953762+0.951226I$ $b=-0.325584-0.585988I$	$-6.50834-4.79164I$	$-9.43330+4.58871I$
$u=-1.050461+0.434817I$ $a=-0.953762-0.951226I$ $b=-0.325584+0.585988I$	$-6.50834+4.79164I$	$-9.43330-4.58871I$
$u=-0.931392-0.876271I$ $a=-1.23579-0.88821I$ $b=\ \ 1.69939-0.19552I$	$6.35313-3.25083I$	$-3.04144+2.67262I$
$u=-0.931392+0.876271I$ $a=-1.23579+0.88821I$ $b=\ \ 1.69939+0.19552I$	$6.35313+3.25083I$	$-3.04144-2.67262I$
$u=-0.619026-0.353653I$ $a=\ \ 2.00800-1.43553I$ $b=-0.603838+0.687137I$	$-4.95095+1.33491I$	$-5.91593+1.31203I$
$u=-0.619026+0.353653I$ $a=\ \ 2.00800+1.43553I$ $b=-0.603838-0.687137I$	$-4.95095-1.33491I$	$-5.91593-1.31203I$
$u=\ \ 0.568178-0.624341I$ $a=-0.810571+0.115740I$ $b=-0.251884+1.139160I$	$-4.04644+2.66477I$	$-7.34246-3.51719I$
$u=\ \ 0.568178+0.624341I$ $a=-0.810571-0.115740I$ $b=-0.251884-1.139160I$	$-4.04644-2.66477I$	$-7.34246+3.51719I$
$u=\ \ 0.890464$ $a=\ \ 0.557576$ $b=\ \ 0.938618$	0.241342	1.70093
$u=\ \ 1.087470-0.533146I$ $a=\ \ 0.213335-0.242827I$ $b=\ \ 0.012610-0.843323I$	$-5.77248+1.97523I$	$-11.11734-0.94758I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=\ \ 1.087470+0.533146I$ $a=\ \ 0.213335+0.242827I$ $b=\ \ 0.012610+0.843323I$	$-5.77248-1.97523I$	$-11.11734+0.94758I$

III. $\boldsymbol{I_3^u} =$
$\langle u^{18}-6u^{17}+\cdots+10u-4,\ 5u^{17}-20u^{16}+\cdots+4a+12,\ 3u^{17}-18u^{16}+\cdots+2b+10\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-\frac{5}{4}u^{17}+5u^{16}+\cdots+\frac{19}{4}u-3\\-\frac{3}{2}u^{17}+9u^{16}+\cdots+\frac{21}{2}u-5\end{pmatrix}$$
$$a_8 = \begin{pmatrix}\frac{1}{4}u^{17}-4u^{16}+\cdots-\frac{23}{4}u+2\\-\frac{3}{2}u^{17}+9u^{16}+\cdots+\frac{21}{2}u-5\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-\frac{5}{4}u^{17}+9u^{16}+\cdots+\frac{59}{4}u-9\\\frac{5}{2}u^{17}-15u^{16}+\cdots-\frac{39}{2}u+11\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-\frac{1}{2}u^{17}+\frac{5}{2}u^{16}+\cdots+\frac{5}{2}u-\frac{1}{2}\\\frac{1}{2}u^{17}-2u^{16}+\cdots+2u^2-\frac{1}{2}u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}3u^{17}-\frac{35}{2}u^{16}+\cdots-26u+\frac{31}{2}\\-\frac{7}{2}u^{17}+18u^{16}+\cdots+\frac{45}{2}u-10\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-\frac{1}{2}u^{16}+2u^{15}+\cdots-u+\frac{3}{2}\\\frac{3}{2}u^{17}-6u^{16}+\cdots+5u^2-\frac{9}{2}u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-\frac{1}{2}u^{16}+2u^{15}+\cdots-u+\frac{3}{2}\\\frac{3}{2}u^{17}-6u^{16}+\cdots+5u^2-\frac{9}{2}u\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.232754 - 0.324924I$ $a = 0.257894 - 0.181216I$ $b = 0.886664 - 0.189258I$	$-5.50095 - 6.46042I$	$-6.77713 + 7.07518I$
$u = -1.232754 + 0.324924I$ $a = 0.257894 + 0.181216I$ $b = 0.886664 + 0.189258I$	$-5.50095 + 6.46042I$	$-6.77713 - 7.07518I$
$u = -1.03064$ $a = -0.576519$ $b = -1.20658$	-0.344722	-12.6083
$u = -0.477881 - 0.414788I$ $a = 0.121456 + 0.765696I$ $b = -0.556271 + 0.507565I$	$1.14170 - 1.25649I$	$2.18406 + 4.14834I$
$u = -0.477881 + 0.414788I$ $a = 0.121456 - 0.765696I$ $b = -0.556271 - 0.507565I$	$1.14170 + 1.25649I$	$2.18406 - 4.14834I$
$u = 0.034225 - 0.854848I$ $a = -0.575049 - 0.286242I$ $b = 0.667178 - 0.239294I$	$-1.28974 + 2.24091I$	$-2.04967 - 3.46388I$
$u = 0.034225 + 0.854848I$ $a = -0.575049 + 0.286242I$ $b = 0.667178 + 0.239294I$	$-1.28974 - 2.24091I$	$-2.04967 + 3.46388I$
$u = 0.745128$ $a = -0.611661$ $b = 0.116162$	-0.993591	-11.3765
$u = 0.761337 - 0.893787I$ $a = 1.58989 - 0.60538I$ $b = -1.84179 - 0.14912I$	$6.17929 + 0.49659I$	$-2.59772 + 0.34027I$
$u = 0.761337 + 0.893787I$ $a = 1.58989 + 0.60538I$ $b = -1.84179 + 0.14912I$	$6.17929 - 0.49659I$	$-2.59772 - 0.34027I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.783872 - 0.987963I$ $a = -1.19142 + 0.90650I$ $b = 1.87322 - 0.37011I$	$3.90675 - 6.64708I$	$-3.39037 + 3.27550I$
$u = 0.783872 + 0.987963I$ $a = -1.19142 - 0.90650I$ $b = 1.87322 + 0.37011I$	$3.90675 + 6.64708I$	$-3.39037 - 3.27550I$
$u = 1.038005 - 0.783746I$ $a = 1.12937 - 1.35055I$ $b = -1.78812 - 0.17611I$	$5.30009 + 5.74871I$	$-4.51000 - 4.97294I$
$u = 1.038005 + 0.783746I$ $a = 1.12937 + 1.35055I$ $b = -1.78812 + 0.17611I$	$5.30009 - 5.74871I$	$-4.51000 + 4.97294I$
$u = 1.063091 - 0.847970I$ $a = -1.42765 + 0.98450I$ $b = 1.87096 + 0.72149I$	$3.01116 + 13.36855I$	$-4.65398 - 7.41233I$
$u = 1.063091 + 0.847970I$ $a = -1.42765 - 0.98450I$ $b = 1.87096 - 0.72149I$	$3.01116 - 13.36855I$	$-4.65398 + 7.41233I$
$u = 1.172861 - 0.467576I$ $a = -0.060409 + 0.687195I$ $b = 0.433362 + 0.027095I$	$-4.67695 + 2.28427I$	$-4.21274 - 1.51830I$
$u = 1.172861 + 0.467576I$ $a = -0.060409 - 0.687195I$ $b = 0.433362 - 0.027095I$	$-4.67695 - 2.28427I$	$-4.21274 + 1.51830I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^5-u^4+u^2+u-1)^4$ $(u^{11}+u^{10}-2u^9-3u^8+3u^7+5u^6-2u^5-4u^4+2u^3+2u^2-u-1)$ $(u^{18}+6u^{17}+\cdots-10u-4)$
c_2	$(1+3u+3u^2+4u^3+u^4+u^5)^4(u^{11}+5u^{10}+\cdots+5u+1)$ $(u^{18}+6u^{17}+\cdots+44u+16)$
c_3	$(u^{11}+u^{10}-4u^9-4u^8+6u^7+6u^6-2u^5-3u^4-4u^3-u^2+4u+1)$ $(u^{18}+u^{17}+\cdots-2u+1)(u^{20}-u^{19}+\cdots+78u+43)$
c_4, c_9	$(u^{11}-u^{10}-4u^9+4u^8+6u^7-6u^6-2u^5+3u^4-4u^3+u^2+4u-1)$ $(u^{18}+u^{17}+\cdots-2u+1)(u^{20}-u^{19}+\cdots+78u+43)$
c_5	$(u^5-u^4+u^2+u-1)^4$ $(u^{11}-u^{10}-2u^9+3u^8+3u^7-5u^6-2u^5+4u^4+2u^3-2u^2-u+1)$ $(u^{18}+6u^{17}+\cdots-10u-4)$
c_6	$(u^2-u+1)^{10}(u^{11}-u^{10}+\cdots+2u+1)$ $(u^{18}+12u^{17}+\cdots-144u-32)$
c_7	$(u^{11}-u^9-5u^8-9u^7+7u^6+24u^5-3u^4+6u^3+6u^2+2u+1)$ $(u^{18}+17u^{16}+\cdots-4u-1)(u^{20}+u^{19}+\cdots+860u+1849)$
c_8	$(u^{11}+2u^{10}+u^9+4u^8+4u^7+6u^5+u^4+u^3+3u^2-u+1)$ $(u^{18}+2u^{17}+\cdots-15u-1)(u^{20}+3u^{19}+\cdots+982u+169)$
c_{10}	$(u^2-u+1)^{10}(u^{11}+u^{10}+\cdots+2u-1)$ $(u^{18}+12u^{17}+\cdots-144u-32)$
c_{11}	$(u^{11}-2u^{10}+u^9-4u^8+4u^7+6u^5-u^4+u^3-3u^2-u-1)$ $(u^{18}+2u^{17}+\cdots-15u-1)(u^{20}+3u^{19}+\cdots+982u+169)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(-1+3y-3y^2+4y^3-y^4+y^5)^4(y^{11}-5y^{10}+\cdots+5y-1)$ $(y^{18}-6y^{17}+\cdots-44y+16)$
c_2	$(-1+3y+13y^2+16y^3+7y^4+y^5)^4(y^{11}+7y^{10}+\cdots-7y-1)$ $(y^{18}+14y^{17}+\cdots+1680y+256)$
c_3, c_4, c_9	$(y^{11}-9y^{10}+\cdots+18y-1)(y^{18}-9y^{17}+\cdots-8y+1)$ $(y^{20}-9y^{19}+\cdots-12276y+1849)$
c_6, c_{10}	$(y^2+y+1)^{10}(y^{11}+5y^{10}+\cdots+2y-1)$ $(y^{18}+6y^{17}+\cdots-9984y+1024)$
c_7	$(y^{11}-2y^{10}+\cdots-8y-1)(y^{18}+34y^{17}+\cdots-6y+1)$ $(y^{20}+15y^{19}+\cdots-22905412y+3418801)$
c_8, c_{11}	$(y^{11}-2y^{10}+\cdots-5y-1)(y^{18}-30y^{17}+\cdots-93y+1)$ $(y^{20}-13y^{19}+\cdots+46972y+28561)$