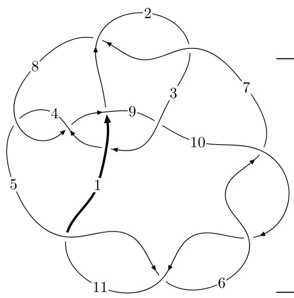
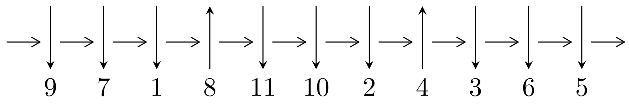
$11a_{345}$ ($K11a_{345}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I^u_1 = \langle &-1.06878\times 10^{64}u^{54} - 1.33106\times 10^{64}u^{53} + \cdots + 2.34911\times 10^{64}b + 3.10634\times 10^{65},\\
&- 4.96423\times 10^{64}u^{54} - 3.38365\times 10^{65}u^{53} + \cdots + 4.46331\times 10^{65}a + 4.84254\times 10^{66},\\
&u^{55} + 2u^{54} + \cdots - 21u - 19\rangle\\
I^u_2 = \langle &-u^9 - 2u^7 - 3u^6 - 4u^5 - 7u^4 - u^3 - 10u^2 + b - 3,\\
&u^9 - 2u^8 + 4u^7 - 5u^6 + 8u^5 - 11u^4 + 7u^3 - 9u^2 + a + 2u - 5,\\
&u^{10} - u^9 + 4u^8 - 2u^7 + 9u^6 - 3u^5 + 10u^4 - u^3 + 5u^2 + 1\rangle
\end{aligned}$$

* 2 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. $\boldsymbol{I_1^u = \langle -1.07 \times 10^{64} u^{54} - 1.33 \times 10^{64} u^{53} + \cdots + 2.35 \times 10^{64} b + 3.11 \times 10^{65},\ -4.96 \times 10^{64} u^{54} - 3.38 \times 10^{65} u^{53} + \cdots + 4.46 \times 10^{65} a + 4.84 \times 10^{66},\ u^{55} + 2u^{54} + \cdots - 21u - 19 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.111223u^{54} + 0.758104u^{53} + \cdots - 2.14133u - 10.8497 \\ 0.454971u^{54} + 0.566623u^{53} + \cdots + 0.405867u - 13.2235 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.237528u^{54} + 0.475907u^{53} + \cdots - 8.87677u - 2.80560 \\ 0.821183u^{54} + 1.24967u^{53} + \cdots - 15.1607u - 15.3408 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.203904u^{54} + 1.47436u^{53} + \cdots + 12.2860u - 39.9386 \\ -0.967112u^{54} - 1.05043u^{53} + \cdots + 16.7082u - 2.90059 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.45501u^{54} - 2.10564u^{53} + \cdots + 32.3133u + 9.63822 \\ -0.567890u^{54} - 1.35518u^{53} + \cdots + 23.9697u + 10.6270 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.566195u^{54} + 1.32473u^{53} + \cdots - 1.73546u - 24.0732 \\ 0.454971u^{54} + 0.566623u^{53} + \cdots + 0.405867u - 13.2235 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.49742u^{54} + 2.39469u^{53} + \cdots - 43.4290u - 0.564570 \\ 0.356541u^{54} + 0.824208u^{53} + \cdots - 9.96821u - 10.6136 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0874572u^{54} - 1.59572u^{53} + \cdots + 35.1757u + 23.3627 \\ -0.419464u^{54} - 0.762736u^{53} + \cdots + 15.0261u + 9.25174 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0874572u^{54} - 1.59572u^{53} + \cdots + 35.1757u + 23.3627 \\ -0.419464u^{54} - 0.762736u^{53} + \cdots + 15.0261u + 9.25174 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2.37110u^{54} + 5.51320u^{53} + \cdots - 14.4173u - 120.988$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{55} + 3u^{54} + \cdots + 3u^2 + 1$
c_2, c_7	$u^{55} - u^{54} + \cdots - 8u + 88$
c_3	$u^{55} - 9u^{54} + \cdots - 76u + 7$
c_4, c_8	$u^{55} - 2u^{54} + \cdots - 21u + 19$
c_5, c_6, c_{10} c_{11}	$u^{55} + u^{54} + \cdots - 5u + 7$
c_9	$u^{55} + 12u^{53} + \cdots - 2271u + 6677$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{55} - 3y^{54} + \cdots - 6y - 1$
c_2, c_7	$y^{55} + 45y^{54} + \cdots - 134048y - 7744$
c_3	$y^{55} + 3y^{54} + \cdots - 160y - 49$
c_4, c_8	$y^{55} + 30y^{54} + \cdots - 927y - 361$
c_5, c_6, c_{10} c_{11}	$y^{55} + 69y^{54} + \cdots - 843y - 49$
c_9	$y^{55} + 24y^{54} + \cdots - 671436323y - 44582329$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.401482 + 0.925485I$ $a = -2.81752 - 0.40677I$ $b = -0.01279 + 1.63475I$	$12.00640 + 0.63513I$	$-0.597872 + 0.536133I$
$u = -0.401482 - 0.925485I$ $a = -2.81752 + 0.40677I$ $b = -0.01279 - 1.63475I$	$12.00640 - 0.63513I$	$-0.597872 - 0.536133I$
$u = -0.476583 + 0.910485I$ $a = 2.02609 + 0.84809I$ $b = -0.19570 - 1.65977I$	$12.54410 - 5.30776I$	$-0.93873 + 5.45617I$
$u = -0.476583 - 0.910485I$ $a = 2.02609 - 0.84809I$ $b = -0.19570 + 1.65977I$	$12.54410 + 5.30776I$	$-0.93873 - 5.45617I$
$u = 0.312846 + 0.902609I$ $a = -0.594280 - 0.941337I$ $b = 0.140808 - 0.966052I$	$3.17927 + 3.14967I$	$-1.09390 - 6.92052I$
$u = 0.312846 - 0.902609I$ $a = -0.594280 + 0.941337I$ $b = 0.140808 + 0.966052I$	$3.17927 - 3.14967I$	$-1.09390 + 6.92052I$
$u = 0.415600 + 0.985014I$ $a = -0.590021 - 0.574831I$ $b = 0.610435 + 1.043970I$	$3.21288 + 1.41327I$	$-0.79892 - 2.47902I$
$u = 0.415600 - 0.985014I$ $a = -0.590021 + 0.574831I$ $b = 0.610435 - 1.043970I$	$3.21288 - 1.41327I$	$-0.79892 + 2.47902I$
$u = 0.912208 + 0.038959I$ $a = -0.394969 + 0.552527I$ $b = 0.02833 + 1.64604I$	$10.07850 - 2.31202I$	$-1.07799 + 2.78280I$
$u = 0.912208 - 0.038959I$ $a = -0.394969 - 0.552527I$ $b = 0.02833 - 1.64604I$	$10.07850 + 2.31202I$	$-1.07799 - 2.78280I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.311945 + 1.050300I$ $a = 1.362230 + 0.285561I$ $b = -0.518495 - 0.178316I$	$-3.26165 + 2.54833I$	$-12.38074 + 0.I$
$u = 0.311945 - 1.050300I$ $a = 1.362230 - 0.285561I$ $b = -0.518495 + 0.178316I$	$-3.26165 - 2.54833I$	$-12.38074 + 0.I$
$u = 1.061010 + 0.282738I$ $a = 0.149658 - 0.140466I$ $b = -0.420813 - 0.866276I$	$5.77965 - 5.30825I$	$0. + 6.19930I$
$u = 1.061010 - 0.282738I$ $a = 0.149658 + 0.140466I$ $b = -0.420813 + 0.866276I$	$5.77965 + 5.30825I$	$0. - 6.19930I$
$u = -0.071907 + 0.862619I$ $a = 1.13431 - 0.98072I$ $b = -0.178670 + 1.238420I$	$1.097690 - 0.148579I$	$-6.50751 - 0.03024I$
$u = -0.071907 - 0.862619I$ $a = 1.13431 + 0.98072I$ $b = -0.178670 - 1.238420I$	$1.097690 + 0.148579I$	$-6.50751 + 0.03024I$
$u = -0.444288 + 0.734086I$ $a = 0.286988 + 0.144362I$ $b = 0.12278 - 1.74080I$	$13.12830 + 1.45980I$	$-0.69339 + 1.95269I$
$u = -0.444288 - 0.734086I$ $a = 0.286988 - 0.144362I$ $b = 0.12278 + 1.74080I$	$13.12830 - 1.45980I$	$-0.69339 - 1.95269I$
$u = -0.326526 + 1.106980I$ $a = -0.974994 + 0.074120I$ $b = 0.472889 + 0.479834I$	$-1.01300 - 1.69462I$	0
$u = -0.326526 - 1.106980I$ $a = -0.974994 - 0.074120I$ $b = 0.472889 - 0.479834I$	$-1.01300 + 1.69462I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.345937+0.758860I$ $a=-0.84685+1.65125I$ $b=\ \ 0.04042+1.69986I$	$12.61370-3.89122I$	$-0.20719+8.96757I$
$u=-0.345937-0.758860I$ $a=-0.84685-1.65125I$ $b=\ \ 0.04042-1.69986I$	$12.61370+3.89122I$	$-0.20719-8.96757I$
$u=-0.070037+1.186880I$ $a=-0.772712-0.062250I$ $b=\ \ 0.456547+0.410612I$	$-1.14656-1.61384I$	0
$u=-0.070037-1.186880I$ $a=-0.772712+0.062250I$ $b=\ \ 0.456547-0.410612I$	$-1.14656+1.61384I$	0
$u=\ \ 0.262970+0.735642I$ $a=-2.80343+0.00413I$ $b=-0.073778-0.672365I$	$3.83511-0.35945I$	$-0.43782-1.63118I$
$u=\ \ 0.262970-0.735642I$ $a=-2.80343-0.00413I$ $b=-0.073778+0.672365I$	$3.83511+0.35945I$	$-0.43782+1.63118I$
$u=-0.427599+1.157360I$ $a=\ \ 1.55960+0.23930I$ $b=-0.371626-0.726720I$	$-1.61640-5.63449I$	0
$u=-0.427599-1.157360I$ $a=\ \ 1.55960-0.23930I$ $b=-0.371626+0.726720I$	$-1.61640+5.63449I$	0
$u=-0.499880+1.150480I$ $a=-1.164720+0.331774I$ $b=\ \ 0.864118-0.012965I$	$0.07105-6.42965I$	0
$u=-0.499880-1.150480I$ $a=-1.164720-0.331774I$ $b=\ \ 0.864118+0.012965I$	$0.07105+6.42965I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.364876 + 0.632638I$ $a = 2.34792 - 0.06805I$ $b = -0.645292 + 0.720286I$	$4.35568 + 2.03916I$	$0.91927 - 6.28505I$
$u = 0.364876 - 0.632638I$ $a = 2.34792 + 0.06805I$ $b = -0.645292 - 0.720286I$	$4.35568 - 2.03916I$	$0.91927 + 6.28505I$
$u = -0.710497 + 0.126727I$ $a = 0.289263 - 0.813765I$ $b = -0.583790 + 0.094289I$	$2.94002 + 1.90835I$	$-3.01939 - 3.01750I$
$u = -0.710497 - 0.126727I$ $a = 0.289263 + 0.813765I$ $b = -0.583790 - 0.094289I$	$2.94002 - 1.90835I$	$-3.01939 + 3.01750I$
$u = -0.515161 + 1.175820I$ $a = 0.243302 - 0.148831I$ $b = -0.118294 + 0.339429I$	$-1.10271 - 2.46020I$	0
$u = -0.515161 - 1.175820I$ $a = 0.243302 + 0.148831I$ $b = -0.118294 - 0.339429I$	$-1.10271 + 2.46020I$	0
$u = -1.234950 + 0.406378I$ $a = 0.056972 + 0.536788I$ $b = -0.12025 + 1.66551I$	$14.5361 + 7.4191I$	0
$u = -1.234950 - 0.406378I$ $a = 0.056972 - 0.536788I$ $b = -0.12025 - 1.66551I$	$14.5361 - 7.4191I$	0
$u = 0.511227 + 1.223850I$ $a = 1.80919 - 0.59265I$ $b = -0.09200 + 1.63412I$	$6.56631 + 7.31158I$	0
$u = 0.511227 - 1.223850I$ $a = 1.80919 + 0.59265I$ $b = -0.09200 - 1.63412I$	$6.56631 - 7.31158I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.615900 + 1.225140I$ $a = -1.385260 - 0.069629I$ $b = 0.588670 - 0.914922I$	$2.82511 + 11.22660I$	0
$u = 0.615900 - 1.225140I$ $a = -1.385260 + 0.069629I$ $b = 0.588670 + 0.914922I$	$2.82511 - 11.22660I$	0
$u = 0.817752 + 1.114980I$ $a = 0.672880 + 0.363392I$ $b = -0.117271 + 0.670556I$	$-0.18164 + 3.45397I$	0
$u = 0.817752 - 1.114980I$ $a = 0.672880 - 0.363392I$ $b = -0.117271 - 0.670556I$	$-0.18164 - 3.45397I$	0
$u = -0.615666 + 0.002465I$ $a = -0.603564 - 0.058474I$ $b = 0.151090 - 0.780801I$	$1.58788 + 1.71112I$	$-2.31712 - 4.70415I$
$u = -0.615666 - 0.002465I$ $a = -0.603564 + 0.058474I$ $b = 0.151090 + 0.780801I$	$1.58788 - 1.71112I$	$-2.31712 + 4.70415I$
$u = 0.780839 + 1.175860I$ $a = -0.977962 - 0.072520I$ $b = 0.11048 - 1.52706I$	$5.67173 + 3.68365I$	0
$u = 0.780839 - 1.175860I$ $a = -0.977962 + 0.072520I$ $b = 0.11048 + 1.52706I$	$5.67173 - 3.68365I$	0
$u = -0.71320 + 1.26334I$ $a = -1.53597 - 0.11861I$ $b = 0.17113 + 1.68532I$	$11.7421 - 14.2160I$	0
$u = -0.71320 - 1.26334I$ $a = -1.53597 + 0.11861I$ $b = 0.17113 - 1.68532I$	$11.7421 + 14.2160I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.32406 + 1.47876I$ $a = -0.398309 + 0.645182I$ $b = 0.04652 - 1.56492I$	$5.43122 + 2.80843I$	0
$u = 0.32406 - 1.47876I$ $a = -0.398309 - 0.645182I$ $b = 0.04652 + 1.56492I$	$5.43122 - 2.80843I$	0
$u = -0.99875 + 1.14713I$ $a = 0.882856 - 0.413980I$ $b = -0.02860 - 1.62809I$	$7.90755 - 3.97377I$	0
$u = -0.99875 - 1.14713I$ $a = 0.882856 + 0.413980I$ $b = -0.02860 + 1.62809I$	$7.90755 + 3.97377I$	0
$u = 0.322466$ $a = -1.13192$ $b = 0.346289$	-0.742548	-13.8050

II.

$$I^u_2 = \langle -u^9 - 2u^7 + \cdots + b - 3,\ u^9 - 2u^8 + \cdots + a - 5,\ u^{10} - u^9 + \cdots + 5u^2 + 1\rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^9 + 2u^8 - 4u^7 + 5u^6 - 8u^5 + 11u^4 - 7u^3 + 9u^2 - 2u + 5 \\ u^9 + 2u^7 + 3u^6 + 4u^5 + 7u^4 + u^3 + 10u^2 + 3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^8 - u^7 + 4u^6 - 2u^5 + 9u^4 - 3u^3 + 10u^2 - u + 5 \\ u^9 + 2u^7 + 3u^6 + 4u^5 + 7u^4 + u^3 + 11u^2 + 3 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^9 - 5u^8 + 8u^7 - 17u^6 + 16u^5 - 35u^4 + 20u^3 - 32u^2 + 6u - 10 \\ u^9 - 3u^8 + 6u^7 - 9u^6 + 12u^5 - 17u^4 + 14u^3 - 12u^2 + 4u - 2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 5u^9 - 5u^8 + 19u^7 - 9u^6 + 41u^5 - 13u^4 + 41u^3 - 2u^2 + 15u + 1 \\ 3u^9 - 4u^8 + 12u^7 - 8u^6 + 24u^5 - 13u^4 + 23u^3 - 4u^2 + 5u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 2u^8 - 2u^7 + 8u^6 - 4u^5 + 18u^4 - 6u^3 + 19u^2 - 2u + 8 \\ u^9 + 2u^7 + 3u^6 + 4u^5 + 7u^4 + u^3 + 10u^2 + 3 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^9 + 5u^8 - 9u^7 + 17u^6 - 18u^5 + 33u^4 - 24u^3 + 28u^2 - 7u + 6 \\ -3u^9 + 3u^8 - 11u^7 + 5u^6 - 23u^5 + 7u^4 - 21u^3 - 6u - 2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -6u^9 + 5u^8 - 20u^7 + 5u^6 - 41u^5 + 4u^4 - 34u^3 - 11u^2 - 7u - 5 \\ -u^8 + 2u^7 - 5u^6 + 5u^5 - 10u^4 + 9u^3 - 11u^2 + 5u - 3 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -6u^9 + 5u^8 - 20u^7 + 5u^6 - 41u^5 + 4u^4 - 34u^3 - 11u^2 - 7u - 5 \\ -u^8 + 2u^7 - 5u^6 + 5u^5 - 10u^4 + 9u^3 - 11u^2 + 5u - 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^9 - 4u^8 + 7u^7 - 12u^6 + 12u^5 - 21u^4 + 13u^3 - 18u^2 - 9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{10} - 2u^9 + u^8 - u^6 - u^5 + 3u^4 + u^3 - u^2 - u + 1$
c_2	$u^{10} + 5u^8 + u^7 + 10u^6 + 3u^5 + 9u^4 + 2u^3 + 4u^2 + u + 1$
c_3	$u^{10} + 3u^7 + 3u^6 - 2u^5 - 3u^4 + u^3 + 4u^2 + 3u + 1$
c_4	$u^{10} - u^9 + 4u^8 - 2u^7 + 9u^6 - 3u^5 + 10u^4 - u^3 + 5u^2 + 1$
c_5, c_6	$u^{10} + 7u^8 + 17u^6 + 17u^4 - u^3 + 7u^2 - 2u + 1$
c_7	$u^{10} + 5u^8 - u^7 + 10u^6 - 3u^5 + 9u^4 - 2u^3 + 4u^2 - u + 1$
c_8	$u^{10} + u^9 + 4u^8 + 2u^7 + 9u^6 + 3u^5 + 10u^4 + u^3 + 5u^2 + 1$
c_9	$u^{10} + u^9 - u^8 - u^7 + 3u^6 + u^5 - u^4 + u^2 + 2u + 1$
c_{10}, c_{11}	$u^{10} + 7u^8 + 17u^6 + 17u^4 + u^3 + 7u^2 + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{10} - 2y^9 - y^8 + 9y^6 - 11y^5 + 15y^4 - 11y^3 + 9y^2 - 3y + 1$
c_2, c_7	$y^{10} + 10y^9 + \cdots + 7y + 1$
c_3	$y^{10} + 6y^8 - 15y^7 + 29y^6 - 26y^5 + 19y^4 - 7y^3 + 4y^2 - y + 1$
c_4, c_8	$y^{10} + 7y^9 + \cdots + 10y + 1$
c_5, c_6, c_{10} c_{11}	$y^{10} + 14y^9 + \cdots + 10y + 1$
c_9	$y^{10} - 3y^9 + 9y^8 - 11y^7 + 15y^6 - 11y^5 + 9y^4 - y^2 - 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.376339 + 0.979659I$ $a = -0.010197 - 0.670492I$ $b = 0.177185 + 1.148900I$	$1.42305 + 1.66512I$	$-4.81318 - 3.74793I$
$u = 0.376339 - 0.979659I$ $a = -0.010197 + 0.670492I$ $b = 0.177185 - 1.148900I$	$1.42305 - 1.66512I$	$-4.81318 + 3.74793I$
$u = 0.081656 + 0.697719I$ $a = 2.80710 + 0.06561I$ $b = -0.383617 + 0.756267I$	$3.50766 + 1.39846I$	$-4.77165 - 3.39480I$
$u = 0.081656 - 0.697719I$ $a = 2.80710 - 0.06561I$ $b = -0.383617 - 0.756267I$	$3.50766 - 1.39846I$	$-4.77165 + 3.39480I$
$u = -0.639127 + 1.159460I$ $a = -0.666258 + 0.191081I$ $b = 0.211333 + 0.326245I$	$-1.26483 - 3.13412I$	$-9.57651 + 7.99526I$
$u = -0.639127 - 1.159460I$ $a = -0.666258 - 0.191081I$ $b = 0.211333 - 0.326245I$	$-1.26483 + 3.13412I$	$-9.57651 - 7.99526I$
$u = -0.207273 + 0.612220I$ $a = 2.20929 - 0.95728I$ $b = -0.07477 - 1.69713I$	$12.44750 - 3.08863I$	$-2.40432 - 0.06420I$
$u = -0.207273 - 0.612220I$ $a = 2.20929 + 0.95728I$ $b = -0.07477 + 1.69713I$	$12.44750 + 3.08863I$	$-2.40432 + 0.06420I$
$u = 0.88840 + 1.31274I$ $a = -0.839929 - 0.058905I$ $b = 0.06987 - 1.53463I$	$5.27080 + 4.15690I$	$-7.93433 - 8.62435I$
$u = 0.88840 - 1.31274I$ $a = -0.839929 + 0.058905I$ $b = 0.06987 + 1.53463I$	$5.27080 - 4.15690I$	$-7.93433 + 8.62435I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{10} - 2u^9 + u^8 - u^6 - u^5 + 3u^4 + u^3 - u^2 - u + 1)$ $\cdot (u^{55} + 3u^{54} + \cdots + 3u^2 + 1)$
c_2	$(u^{10} + 5u^8 + u^7 + 10u^6 + 3u^5 + 9u^4 + 2u^3 + 4u^2 + u + 1)$ $\cdot (u^{55} - u^{54} + \cdots - 8u + 88)$
c_3	$(u^{10} + 3u^7 + 3u^6 - 2u^5 - 3u^4 + u^3 + 4u^2 + 3u + 1)$ $\cdot (u^{55} - 9u^{54} + \cdots - 76u + 7)$
c_4	$(u^{10} - u^9 + 4u^8 - 2u^7 + 9u^6 - 3u^5 + 10u^4 - u^3 + 5u^2 + 1)$ $\cdot (u^{55} - 2u^{54} + \cdots - 21u + 19)$
c_5, c_6	$(u^{10} + 7u^8 + \cdots - 2u + 1)(u^{55} + u^{54} + \cdots - 5u + 7)$
c_7	$(u^{10} + 5u^8 - u^7 + 10u^6 - 3u^5 + 9u^4 - 2u^3 + 4u^2 - u + 1)$ $\cdot (u^{55} - u^{54} + \cdots - 8u + 88)$
c_8	$(u^{10} + u^9 + 4u^8 + 2u^7 + 9u^6 + 3u^5 + 10u^4 + u^3 + 5u^2 + 1)$ $\cdot (u^{55} - 2u^{54} + \cdots - 21u + 19)$
c_9	$(u^{10} + u^9 - u^8 - u^7 + 3u^6 + u^5 - u^4 + u^2 + 2u + 1)$ $\cdot (u^{55} + 12u^{53} + \cdots - 2271u + 6677)$
c_{10}, c_{11}	$(u^{10} + 7u^8 + \cdots + 2u + 1)(u^{55} + u^{54} + \cdots - 5u + 7)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{10} - 2y^9 - y^8 + 9y^6 - 11y^5 + 15y^4 - 11y^3 + 9y^2 - 3y + 1)$ $\cdot (y^{55} - 3y^{54} + \cdots - 6y - 1)$
c_2, c_7	$(y^{10} + 10y^9 + \cdots + 7y + 1)(y^{55} + 45y^{54} + \cdots - 134048y - 7744)$
c_3	$(y^{10} + 6y^8 - 15y^7 + 29y^6 - 26y^5 + 19y^4 - 7y^3 + 4y^2 - y + 1)$ $\cdot (y^{55} + 3y^{54} + \cdots - 160y - 49)$
c_4, c_8	$(y^{10} + 7y^9 + \cdots + 10y + 1)(y^{55} + 30y^{54} + \cdots - 927y - 361)$
c_5, c_6, c_{10} c_{11}	$(y^{10} + 14y^9 + \cdots + 10y + 1)(y^{55} + 69y^{54} + \cdots - 843y - 49)$
c_9	$(y^{10} - 3y^9 + 9y^8 - 11y^7 + 15y^6 - 11y^5 + 9y^4 - y^2 - 2y + 1)$ $\cdot (y^{55} + 24y^{54} + \cdots - 671436323y - 44582329)$