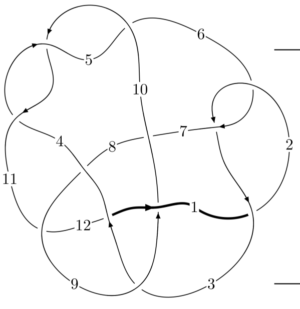
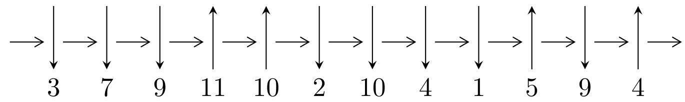
$12n_{0563}$ ($K12n_{0563}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -2.39160 \times 10^{54} u^{47} - 3.95222 \times 10^{54} u^{46} + \cdots + 7.49953 \times 10^{54} b - 2.89856 \times 10^{55}, \\
& 1.44654 \times 10^{55} u^{47} - 1.62245 \times 10^{55} u^{46} + \cdots + 7.49953 \times 10^{54} a + 4.83415 \times 10^{55},\ u^{48} - u^{47} + \cdots + 3u + 1 \rangle \\
I_2^u = \langle & -u^3 + b - 2u,\ -u^{12} - u^{11} - 8u^{10} - 7u^9 - 25u^8 - 17u^7 - 39u^6 - 17u^5 - 32u^4 - 6u^3 - 14u^2 + a + u - 4, \\
& u^{13} + 8u^{11} + 25u^9 - u^8 + 40u^7 - 5u^6 + 36u^5 - 8u^4 + 18u^3 - 5u^2 + 5u - 1 \rangle
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 61 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.

$$\boldsymbol{I_1^u = \langle -2.39\times10^{54}u^{47} - 3.95\times10^{54}u^{46} + \cdots + 7.50\times10^{54}b - 2.90\times10^{55},\ 1.45\times10^{55}u^{47} - 1.62\times10^{55}u^{46} + \cdots + 7.50\times10^{54}a + 4.83\times10^{55},\ u^{48} - u^{47} + \cdots + 3u + 1\rangle}$$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} -1.92884u^{47} + 2.16340u^{46} + \cdots - 4.69127u - 6.44593 \\ 0.318900u^{47} + 0.526995u^{46} + \cdots + 7.68737u + 3.86499 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 5.32722u^{47} - 7.71278u^{46} + \cdots + 5.69560u + 4.89101 \\ -1.65263u^{47} + 2.15021u^{46} + \cdots - 2.13909u + 0.429005 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 3.67459u^{47} - 5.56258u^{46} + \cdots + 3.55651u + 5.32002 \\ -1.65263u^{47} + 2.15021u^{46} + \cdots - 2.13909u + 0.429005 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.429005u^{47} - 1.22363u^{46} + \cdots - 12.6538u - 3.42610 \\ -0.741759u^{47} + 0.279846u^{46} + \cdots - 3.69494u + 0.760160 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.60994u^{47} + 2.69040u^{46} + \cdots + 2.99610u - 2.58094 \\ 0.318900u^{47} + 0.526995u^{46} + \cdots + 7.68737u + 3.86499 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.84566u^{47} + 2.55030u^{46} + \cdots - 1.55830u - 4.58260 \\ 0.553995u^{47} + 0.491959u^{46} + \cdots + 10.8786u + 5.49084 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.85623u^{47} - 3.48934u^{46} + \cdots - 4.22125u + 2.81550 \\ -0.399504u^{47} - 1.07854u^{46} + \cdots - 11.0873u - 2.93213 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 7.73136u^{47} - 12.6807u^{46} + \cdots - 1.90430u + 10.9470$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{48} + 14u^{47} + \cdots + 1783u + 121$
c_2, c_6	$u^{48} - 2u^{47} + \cdots - 21u - 11$
c_3, c_8	$u^{48} - u^{47} + \cdots + 56u - 1$
c_4, c_5, c_{10}	$u^{48} - u^{47} + \cdots + 3u + 1$
c_7	$u^{48} - 8u^{47} + \cdots - 28403u + 7979$
c_9	$u^{48} + 4u^{47} + \cdots - 231u - 49$
c_{11}	$u^{48} - 2u^{47} + \cdots + 2483u - 169$
c_{12}	$u^{48} + 5u^{47} + \cdots + 2615u + 313$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{48} + 46y^{47} + \cdots + 485517y + 14641$
c_2, c_6	$y^{48} - 14y^{47} + \cdots - 1783y + 121$
c_3, c_8	$y^{48} + 55y^{47} + \cdots - 3490y + 1$
c_4, c_5, c_{10}	$y^{48} + 35y^{47} + \cdots - y + 1$
c_7	$y^{48} + 46y^{47} + \cdots + 1653354871y + 63664441$
c_9	$y^{48} + 2y^{47} + \cdots + 7105y + 2401$
c_{11}	$y^{48} + 58y^{47} + \cdots - 2857283y + 28561$
c_{12}	$y^{48} - 69y^{47} + \cdots - 5964955y + 97969$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.435520 + 0.942072I$ $a = -1.076810 - 0.546005I$ $b = -0.075623 - 0.253208I$	$0.84017 + 1.53001I$	$-4.48166 - 1.67187I$
$u = -0.435520 - 0.942072I$ $a = -1.076810 + 0.546005I$ $b = -0.075623 + 0.253208I$	$0.84017 - 1.53001I$	$-4.48166 + 1.67187I$
$u = -0.154361 + 1.095650I$ $a = \quad 0.750842 - 0.363346I$ $b = \quad 0.920518 - 0.093530I$	$-4.71668 - 2.11923I$	$-10.82328 + 3.73003I$
$u = -0.154361 - 1.095650I$ $a = \quad 0.750842 + 0.363346I$ $b = \quad 0.920518 + 0.093530I$	$-4.71668 + 2.11923I$	$-10.82328 - 3.73003I$
$u = \quad 0.443963 + 1.034950I$ $a = -0.551533 - 0.438377I$ $b = -1.052700 + 0.633094I$	$1.19625 + 2.65861I$	$-4.00000 - 4.52024I$
$u = \quad 0.443963 - 1.034950I$ $a = -0.551533 + 0.438377I$ $b = -1.052700 - 0.633094I$	$1.19625 - 2.65861I$	$-4.00000 + 4.52024I$
$u = -0.376782 + 0.764505I$ $a = -1.67330 + 2.06393I$ $b = -0.050763 - 1.300670I$	$4.54023 - 1.72963I$	$4.64800 + 3.11123I$
$u = -0.376782 - 0.764505I$ $a = -1.67330 - 2.06393I$ $b = -0.050763 + 1.300670I$	$4.54023 + 1.72963I$	$4.64800 - 3.11123I$
$u = \quad 0.625304 + 0.996638I$ $a = -0.815699 - 0.738147I$ $b = -0.21810 + 1.41293I$	$1.47522 + 0.81061I$	0
$u = \quad 0.625304 - 0.996638I$ $a = -0.815699 + 0.738147I$ $b = -0.21810 - 1.41293I$	$1.47522 - 0.81061I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.179960 + 0.123958I$ $a = -0.19080 + 1.69727I$ $b = 0.16078 - 1.62361I$	$11.96410 + 1.32500I$	0
$u = -1.179960 - 0.123958I$ $a = -0.19080 - 1.69727I$ $b = 0.16078 + 1.62361I$	$11.96410 - 1.32500I$	0
$u = -0.269250 + 1.162830I$ $a = 0.839939 - 0.658536I$ $b = 0.20024 + 1.60053I$	$1.26689 - 2.36269I$	0
$u = -0.269250 - 1.162830I$ $a = 0.839939 + 0.658536I$ $b = 0.20024 - 1.60053I$	$1.26689 + 2.36269I$	0
$u = -0.427605 + 1.128960I$ $a = 0.534297 - 0.374229I$ $b = 1.308210 + 0.533677I$	$0.10991 - 8.23975I$	0
$u = -0.427605 - 1.128960I$ $a = 0.534297 + 0.374229I$ $b = 1.308210 - 0.533677I$	$0.10991 + 8.23975I$	0
$u = 0.352885 + 1.172480I$ $a = 1.53487 + 0.77490I$ $b = 0.397307 - 1.278340I$	$-0.92113 + 6.80242I$	0
$u = 0.352885 - 1.172480I$ $a = 1.53487 - 0.77490I$ $b = 0.397307 + 1.278340I$	$-0.92113 - 6.80242I$	0
$u = 1.226860 + 0.007840I$ $a = 0.12427 + 1.63006I$ $b = -0.18772 - 1.63918I$	$11.45140 - 7.76917I$	0
$u = 1.226860 - 0.007840I$ $a = 0.12427 - 1.63006I$ $b = -0.18772 + 1.63918I$	$11.45140 + 7.76917I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.376298 + 1.187320I$ $a = 0.913505 - 0.477894I$ $b = 0.057189 - 0.405233I$	$0.12397 + 4.49470I$	0
$u = 0.376298 - 1.187320I$ $a = 0.913505 + 0.477894I$ $b = 0.057189 + 0.405233I$	$0.12397 - 4.49470I$	0
$u = 0.580032 + 0.452436I$ $a = -0.92293 - 1.44096I$ $b = -0.33652 + 1.50463I$	$2.95847 + 4.00692I$	$-2.67836 - 6.96933I$
$u = 0.580032 - 0.452436I$ $a = -0.92293 + 1.44096I$ $b = -0.33652 - 1.50463I$	$2.95847 - 4.00692I$	$-2.67836 + 6.96933I$
$u = -0.151969 + 0.640678I$ $a = 1.79473 + 2.00434I$ $b = -0.128016 - 1.103990I$	$2.23261 - 4.69663I$	$-2.29866 + 7.37362I$
$u = -0.151969 - 0.640678I$ $a = 1.79473 - 2.00434I$ $b = -0.128016 + 1.103990I$	$2.23261 + 4.69663I$	$-2.29866 - 7.37362I$
$u = -0.024639 + 0.631913I$ $a = 1.292480 - 0.327555I$ $b = 0.44857 + 1.55247I$	$3.50058 + 0.55008I$	$-1.118536 - 0.349377I$
$u = -0.024639 - 0.631913I$ $a = 1.292480 + 0.327555I$ $b = 0.44857 - 1.55247I$	$3.50058 - 0.55008I$	$-1.118536 + 0.349377I$
$u = 0.219879 + 0.581123I$ $a = -0.507645 - 0.541214I$ $b = -0.194376 + 0.350188I$	$-0.254703 + 1.031080I$	$-4.07316 - 6.58896I$
$u = 0.219879 - 0.581123I$ $a = -0.507645 + 0.541214I$ $b = -0.194376 - 0.350188I$	$-0.254703 - 1.031080I$	$-4.07316 + 6.58896I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.65049 + 1.32174I$ $a = -0.96287 + 1.04566I$ $b = -0.36043 - 1.58899I$	$8.28567 - 7.72804I$	0
$u = -0.65049 - 1.32174I$ $a = -0.96287 - 1.04566I$ $b = -0.36043 + 1.58899I$	$8.28567 + 7.72804I$	0
$u = -0.08747 + 1.49239I$ $a = 0.207043 + 0.731169I$ $b = -0.048453 - 0.802768I$	$-7.65194 - 1.77181I$	0
$u = -0.08747 - 1.49239I$ $a = 0.207043 - 0.731169I$ $b = -0.048453 + 0.802768I$	$-7.65194 + 1.77181I$	0
$u = 0.498135 + 0.056251I$ $a = -1.178220 + 0.256245I$ $b = 0.343725 + 0.931868I$	$3.49281 + 1.01877I$	$0.423557 - 0.776578I$
$u = 0.498135 - 0.056251I$ $a = -1.178220 - 0.256245I$ $b = 0.343725 - 0.931868I$	$3.49281 - 1.01877I$	$0.423557 + 0.776578I$
$u = 0.62518 + 1.40469I$ $a = 0.905325 + 0.965225I$ $b = 0.41416 - 1.62727I$	$7.1315 + 14.2674I$	0
$u = 0.62518 - 1.40469I$ $a = 0.905325 - 0.965225I$ $b = 0.41416 + 1.62727I$	$7.1315 - 14.2674I$	0
$u = -0.382314 + 0.212503I$ $a = 0.083866 + 0.833170I$ $b = -0.701403 + 1.054330I$	$2.71637 + 4.57604I$	$-0.11105 - 6.10786I$
$u = -0.382314 - 0.212503I$ $a = 0.083866 - 0.833170I$ $b = -0.701403 - 1.054330I$	$2.71637 - 4.57604I$	$-0.11105 + 6.10786I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.426711$ $a=\ 0.214040$ $b=-0.725860$	-1.65788	-3.70660
$u=-0.404609$ $a=-2.82616$ $b=\ 0.0167904$	-2.55057	7.13390
$u=\ 0.66628+1.45057I$ $a=-0.816215-0.730920I$ $b=-0.03431+1.50514I$	$6.99328-1.08384I$	0
$u=\ 0.66628-1.45057I$ $a=-0.816215+0.730920I$ $b=-0.03431-1.50514I$	$6.99328+1.08384I$	0
$u=-0.57241+1.49585I$ $a=\ 0.805241-0.729040I$ $b=\ 0.03707+1.53975I$	$6.90676-4.94555I$	0
$u=-0.57241-1.49585I$ $a=\ 0.805241+0.729040I$ $b=\ 0.03707-1.53975I$	$6.90676+4.94555I$	0
$u=\ 0.01361+1.60580I$ $a=\ 0.215681+0.206965I$ $b=-0.044827-0.676036I$	$-8.07717+1.45463I$	0
$u=\ 0.01361-1.60580I$ $a=\ 0.215681-0.206965I$ $b=-0.044827+0.676036I$	$-8.07717-1.45463I$	0

II. $\boldsymbol{I_2^u = \langle -u^3 + b - 2u,\ -u^{12} - u^{11} + \cdots + a - 4,\ u^{13} + 8u^{11} + \cdots + 5u - 1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} u^{12} + u^{11} + \cdots - u + 4 \\ u^3 + 2u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^{12} - u^{11} + \cdots - 3u - 3 \\ u^{11} + 7u^9 + 18u^7 - u^6 + 22u^5 - 4u^4 + 14u^3 - 4u^2 + 4u - 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^{12} - 8u^{10} + \cdots + u - 4 \\ u^{11} + 7u^9 + 18u^7 - u^6 + 22u^5 - 4u^4 + 14u^3 - 4u^2 + 4u - 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^{12} - 7u^{10} - 18u^8 + u^7 - 22u^6 + 4u^5 - 14u^4 + 4u^3 - 4u^2 + u - 1 \\ -u^6 - 4u^4 - 4u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^{12} + u^{11} + \cdots + u + 4 \\ u^3 + 2u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^{12} + u^{11} + \cdots + 2u + 4 \\ -u^9 - 5u^7 - 8u^5 - 4u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{12} - 8u^{10} - 25u^8 + u^7 - 40u^6 + 5u^5 - 36u^4 + 7u^3 - 18u^2 + 3u - 5 \\ -u^{11} - 7u^9 - 18u^7 - 21u^5 - 11u^3 - u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -2u^{11} - 5u^{10} - 15u^9 - 30u^8 - 42u^7 - 65u^6 - 51u^5 - 68u^4 - 23u^3 - 38u^2 - 2u - 16$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{13} - 5u^{12} + \cdots + 5u - 1$
c_2	$u^{13} - u^{12} + \cdots + u - 1$
c_3	$u^{13} + 8u^{11} + \cdots + 2u - 3$
c_4, c_5	$u^{13} + 8u^{11} + \cdots + 5u - 1$
c_6	$u^{13} + u^{12} + \cdots + u + 1$
c_7	$u^{13} + 3u^{12} + \cdots - 3u - 1$
c_8	$u^{13} + 8u^{11} + \cdots + 2u + 3$
c_9	$u^{13} + 3u^{12} - 4u^{10} + 2u^9 + u^8 - 4u^7 + 3u^6 - u^5 - 2u^4 + 2u^3 - 2u^2 + u - 1$
c_{10}	$u^{13} + 8u^{11} + \cdots + 5u + 1$
c_{11}	$u^{13} + u^{12} + \cdots - 3u + 1$
c_{12}	$u^{13} - 2u^{11} + 3u^{10} + 3u^9 + u^8 + 10u^7 + 2u^6 - 4u^5 + 5u^4 - 2u^3 + 5u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{13}+11y^{12}+\cdots-7y-1$
c_2, c_6	$y^{13}-5y^{12}+\cdots+5y-1$
c_3, c_8	$y^{13}+16y^{12}+\cdots-20y-9$
c_4, c_5, c_{10}	$y^{13}+16y^{12}+\cdots+15y-1$
c_7	$y^{13}-y^{12}+\cdots+3y-1$
c_9	$y^{13}-9y^{12}+\cdots-3y-1$
c_{11}	$y^{13}+3y^{12}+\cdots+9y-1$
c_{12}	$y^{13}-4y^{12}+\cdots+25y-1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.406397 + 0.828070I$ $a = 0.623860 - 1.154070I$ $b = -0.04391 + 1.49862I$	$3.19757 - 2.07962I$	$-2.23765 + 3.84644I$
$u = -0.406397 - 0.828070I$ $a = 0.623860 + 1.154070I$ $b = -0.04391 - 1.49862I$	$3.19757 + 2.07962I$	$-2.23765 - 3.84644I$
$u = -0.405399 + 1.034180I$ $a = 0.943206 - 0.498481I$ $b = 0.42334 + 1.47217I$	$2.52863 - 1.04333I$	$-0.891974 + 0.899946I$
$u = -0.405399 - 1.034180I$ $a = 0.943206 + 0.498481I$ $b = 0.42334 - 1.47217I$	$2.52863 + 1.04333I$	$-0.891974 - 0.899946I$
$u = 0.276046 + 1.147950I$ $a = -1.238510 + 0.159643I$ $b = -0.518180 + 1.045570I$	$0.33288 + 6.03810I$	$-3.21578 - 6.43497I$
$u = 0.276046 - 1.147950I$ $a = -1.238510 - 0.159643I$ $b = -0.518180 - 1.045570I$	$0.33288 - 6.03810I$	$-3.21578 + 6.43497I$
$u = 0.351249 + 0.612687I$ $a = -0.00263 - 1.64078I$ $b = 0.350273 + 1.222150I$	$2.13932 - 3.61205I$	$-3.50656 + 0.16807I$
$u = 0.351249 - 0.612687I$ $a = -0.00263 + 1.64078I$ $b = 0.350273 - 1.222150I$	$2.13932 + 3.61205I$	$-3.50656 - 0.16807I$
$u = 0.05874 + 1.54134I$ $a = -0.078914 + 0.461676I$ $b = -0.300983 - 0.563189I$	$-8.64883 + 1.03612I$	$-15.2263 + 1.7097I$
$u = 0.05874 - 1.54134I$ $a = -0.078914 - 0.461676I$ $b = -0.300983 + 0.563189I$	$-8.64883 - 1.03612I$	$-15.2263 - 1.7097I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.02035 + 1.65258I$ $a = -0.017867 + 0.348906I$ $b = -0.126034 - 1.206020I$	$-6.33652 - 2.53081I$	$-3.17775 + 4.10072I$
$u = 0.02035 - 1.65258I$ $a = -0.017867 - 0.348906I$ $b = -0.126034 + 1.206020I$	$-6.33652 + 2.53081I$	$-3.17775 - 4.10072I$
$u = 0.210812$ $a = 4.54171$ $b = 0.430994$	-2.87546	-18.4880

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{13}-5u^{12}+\cdots+5u-1)(u^{48}+14u^{47}+\cdots+1783u+121)$
c_2	$(u^{13}-u^{12}+\cdots+u-1)(u^{48}-2u^{47}+\cdots-21u-11)$
c_3	$(u^{13}+8u^{11}+\cdots+2u-3)(u^{48}-u^{47}+\cdots+56u-1)$
c_4, c_5	$(u^{13}+8u^{11}+\cdots+5u-1)(u^{48}-u^{47}+\cdots+3u+1)$
c_6	$(u^{13}+u^{12}+\cdots+u+1)(u^{48}-2u^{47}+\cdots-21u-11)$
c_7	$(u^{13}+3u^{12}+\cdots-3u-1)(u^{48}-8u^{47}+\cdots-28403u+7979)$
c_8	$(u^{13}+8u^{11}+\cdots+2u+3)(u^{48}-u^{47}+\cdots+56u-1)$
c_9	$(u^{13}+3u^{12}-4u^{10}+2u^9+u^8-4u^7+3u^6-u^5-2u^4+2u^3-2u^2+u-1)$ $\cdot(u^{48}+4u^{47}+\cdots-231u-49)$
c_{10}	$(u^{13}+8u^{11}+\cdots+5u+1)(u^{48}-u^{47}+\cdots+3u+1)$
c_{11}	$(u^{13}+u^{12}+\cdots-3u+1)(u^{48}-2u^{47}+\cdots+2483u-169)$
c_{12}	$(u^{13}-2u^{11}+3u^{10}+3u^9+u^8+10u^7+2u^6-4u^5+5u^4-2u^3+5u-1)$ $\cdot(u^{48}+5u^{47}+\cdots+2615u+313)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{13}+11y^{12}+\cdots-7y-1)(y^{48}+46y^{47}+\cdots+485517y+14641)$
c_2, c_6	$(y^{13}-5y^{12}+\cdots+5y-1)(y^{48}-14y^{47}+\cdots-1783y+121)$
c_3, c_8	$(y^{13}+16y^{12}+\cdots-20y-9)(y^{48}+55y^{47}+\cdots-3490y+1)$
c_4, c_5, c_{10}	$(y^{13}+16y^{12}+\cdots+15y-1)(y^{48}+35y^{47}+\cdots-y+1)$
c_7	$(y^{13}-y^{12}+\cdots+3y-1)$ $\cdot(y^{48}+46y^{47}+\cdots+1653354871y+63664441)$
c_9	$(y^{13}-9y^{12}+\cdots-3y-1)(y^{48}+2y^{47}+\cdots+7105y+2401)$
c_{11}	$(y^{13}+3y^{12}+\cdots+9y-1)(y^{48}+58y^{47}+\cdots-2857283y+28561)$
c_{12}	$(y^{13}-4y^{12}+\cdots+25y-1)(y^{48}-69y^{47}+\cdots-5964955y+97969)$