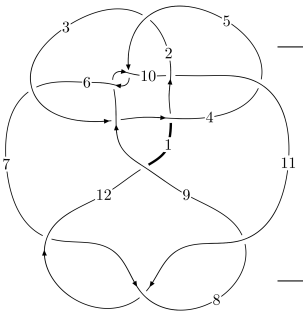
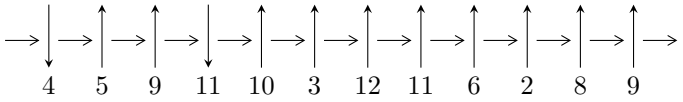
$12n_{0699}$ $(K12n_{0699})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -4.48533 \times 10^{64} u^{38} - 1.99110 \times 10^{65} u^{37} + \cdots + 1.70583 \times 10^{66} b + 7.99429 \times 10^{65},$$
$$2.92714 \times 10^{66} u^{38} + 1.55651 \times 10^{67} u^{37} + \cdots + 4.94689 \times 10^{67} a + 4.66164 \times 10^{68},\ u^{39} + 4u^{38} + \cdots + 95u + 1 \rangle$$
$$I_2^u = \langle -206u^{15} + 554u^{14} + \cdots + 239b + 200,\ -339u^{15} + 914u^{14} + \cdots + 239a + 53,$$
$$u^{16} - 3u^{15} + 5u^{14} - 4u^{13} + 3u^{12} - 6u^{11} + 12u^{10} - 10u^9 + u^8 + 6u^7 - 3u^5 + 2u^4 + 3u^3 - u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 55 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. $\boldsymbol{I_1^u = \langle -4.49 \times 10^{64} u^{38} - 1.99 \times 10^{65} u^{37} + \cdots + 1.71 \times 10^{66} b + 7.99 \times 10^{65},\ 2.93 \times 10^{66} u^{38} + 1.56 \times 10^{67} u^{37} + \cdots + 4.95 \times 10^{67} a + 4.66 \times 10^{68},\ u^{39} + 4u^{38} + \cdots + 95u + 29 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -0.0591713u^{38} - 0.314643u^{37} + \cdots - 24.3274u - 9.42337 \\ 0.0262942u^{38} + 0.116723u^{37} + \cdots + 4.56393u - 0.468647 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.0854656u^{38} - 0.431367u^{37} + \cdots - 28.8913u - 8.95473 \\ 0.0262942u^{38} + 0.116723u^{37} + \cdots + 4.56393u - 0.468647 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.517557u^{38} + 2.13119u^{37} + \cdots + 67.6443u + 17.6022 \\ 0.128326u^{38} + 0.499772u^{37} + \cdots + 14.8366u + 3.04010 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0201548u^{38} - 0.000488821u^{37} + \cdots - 13.3460u - 6.82775 \\ 0.0712460u^{38} + 0.287520u^{37} + \cdots + 8.42457u - 0.225151 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.120505u^{38} + 0.724667u^{37} + \cdots + 51.9973u + 19.7269 \\ -0.0193862u^{38} + 0.0323405u^{37} + \cdots + 18.8628u + 7.88916 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.170703u^{38} - 0.565196u^{37} + \cdots - 9.52828u + 2.61870 \\ -0.0658720u^{38} - 0.274198u^{37} + \cdots - 13.3540u - 2.25891 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.108782u^{38} - 0.236844u^{37} + \cdots + 10.0488u + 8.28847 \\ -0.00548525u^{38} - 0.0123701u^{37} + \cdots - 3.89489u + 0.0804277 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.406322u^{38} - 1.94808u^{37} + \cdots - 100.418u - 28.6038 \\ -0.156580u^{38} - 0.684622u^{37} + \cdots - 24.5158u - 6.19127 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.518418u^{38} + 1.72726u^{37} + \cdots + 17.1390u - 6.89267 \\ 0.124927u^{38} + 0.415220u^{37} + \cdots - 0.251870u - 2.53467 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.432519u^{38} - 1.98528u^{37} + \cdots - 85.2061u - 12.7504$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{39}+6u^{38}+\cdots+68813u-4453$
c_2	$u^{39}+12u^{38}+\cdots+33u-1$
c_3	$u^{39}-u^{38}+\cdots-7950u-6379$
c_4	$u^{39}-17u^{37}+\cdots+59051u-25039$
c_5, c_9	$u^{39}-3u^{38}+\cdots-8u-1$
c_6	$u^{39}-4u^{38}+\cdots+621578u-106361$
c_7, c_8, c_{11}	$u^{39}+u^{38}+\cdots+40u-13$
c_{10}	$u^{39}-4u^{38}+\cdots+95u-29$
c_{12}	$u^{39}-u^{38}+\cdots+1387526u-100009$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{39} - 86y^{38} + \cdots + 1745564923y - 19829209$
c_2	$y^{39} + 12y^{38} + \cdots + 2135y - 1$
c_3	$y^{39} + 77y^{38} + \cdots - 133130362y - 40691641$
c_4	$y^{39} - 34y^{38} + \cdots + 7818316899y - 626951521$
c_5, c_9	$y^{39} + 31y^{38} + \cdots + 48y - 1$
c_6	$y^{39} + 52y^{38} + \cdots + 161820928428y - 11312662321$
c_7, c_8, c_{11}	$y^{39} + 61y^{38} + \cdots - 4614y - 169$
c_{10}	$y^{39} + 12y^{38} + \cdots - 9187y - 841$
c_{12}	$y^{39} + 199y^{38} + \cdots - 836738153944y - 10001800081$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.443892 + 0.894212I$ $a = 0.136058 - 0.043126I$ $b = 1.102760 + 0.179428I$	$-4.34392 + 3.40044I$	$2.15847 - 4.15591I$
$u = 0.443892 - 0.894212I$ $a = 0.136058 + 0.043126I$ $b = 1.102760 - 0.179428I$	$-4.34392 - 3.40044I$	$2.15847 + 4.15591I$
$u = 0.584880 + 0.814792I$ $a = 1.18601 - 1.16107I$ $b = -0.391017 - 1.238900I$	$-2.68089 + 4.77988I$	$0.54174 - 3.58018I$
$u = 0.584880 - 0.814792I$ $a = 1.18601 + 1.16107I$ $b = -0.391017 + 1.238900I$	$-2.68089 - 4.77988I$	$0.54174 + 3.58018I$
$u = 0.388962 + 0.964036I$ $a = -0.68810 + 1.25836I$ $b = 0.080712 + 1.199870I$	$-3.44253 - 0.59700I$	$4.34930 + 3.15252I$
$u = 0.388962 - 0.964036I$ $a = -0.68810 - 1.25836I$ $b = 0.080712 - 1.199870I$	$-3.44253 + 0.59700I$	$4.34930 - 3.15252I$
$u = 0.724071 + 0.767036I$ $a = 0.527790 + 0.780046I$ $b = 0.123047 + 0.078516I$	$-3.74668 + 1.00507I$	$3.79526 - 1.05866I$
$u = 0.724071 - 0.767036I$ $a = 0.527790 - 0.780046I$ $b = 0.123047 - 0.078516I$	$-3.74668 - 1.00507I$	$3.79526 + 1.05866I$
$u = -0.181436 + 0.922500I$ $a = -0.74681 - 1.43570I$ $b = 0.57246 - 1.38204I$	$-8.18165 - 2.82026I$	$-0.23535 + 2.51294I$
$u = -0.181436 - 0.922500I$ $a = -0.74681 + 1.43570I$ $b = 0.57246 + 1.38204I$	$-8.18165 + 2.82026I$	$-0.23535 - 2.51294I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.215429+1.104370I$ $a=\ \ 0.271873-1.261790I$ $b=-0.70054-1.42784I$	$19.5709-0.0915I$	$-0.041291+0.250584I$
$u=-0.215429-1.104370I$ $a=\ \ 0.271873+1.261790I$ $b=-0.70054+1.42784I$	$19.5709+0.0915I$	$-0.041291-0.250584I$
$u=\ \ 0.869795+0.024295I$ $a=\ \ 0.313165+0.718063I$ $b=\ \ 0.524688+0.787160I$	$-3.32799+1.95686I$	$7.87158-4.03984I$
$u=\ \ 0.869795-0.024295I$ $a=\ \ 0.313165-0.718063I$ $b=\ \ 0.524688-0.787160I$	$-3.32799-1.95686I$	$7.87158+4.03984I$
$u=-0.567289+0.618604I$ $a=-0.642417+0.111976I$ $b=\ \ 0.429754+0.191974I$	$0.70753-1.66098I$	$4.28580+6.70295I$
$u=-0.567289-0.618604I$ $a=-0.642417-0.111976I$ $b=\ \ 0.429754-0.191974I$	$0.70753+1.66098I$	$4.28580-6.70295I$
$u=-0.958602+0.745202I$ $a=-0.176071+1.110370I$ $b=-0.507024-0.126186I$	$-14.7115+0.6008I$	$6.01609+0.22717I$
$u=-0.958602-0.745202I$ $a=-0.176071-1.110370I$ $b=-0.507024+0.126186I$	$-14.7115-0.6008I$	$6.01609-0.22717I$
$u=-0.016312+0.768909I$ $a=\ \ 1.61762+2.88519I$ $b=\ \ 0.085474+1.237340I$	$-7.68184+2.01879I$	$-2.91621-3.56990I$
$u=-0.016312-0.768909I$ $a=\ \ 1.61762-2.88519I$ $b=\ \ 0.085474-1.237340I$	$-7.68184-2.01879I$	$-2.91621+3.56990I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.202386+0.647908I$ $a=-0.94963+5.33367I$ $b=-0.170246+1.217870I$	$-17.9862-1.8167I$	$-3.56636+4.57014I$
$u=-0.202386-0.647908I$ $a=-0.94963-5.33367I$ $b=-0.170246-1.217870I$	$-17.9862+1.8167I$	$-3.56636-4.57014I$
$u=-0.710408+1.123780I$ $a=-0.072881+0.197480I$ $b=-1.171160+0.168197I$	$-16.1607-6.8649I$	$3.92588+3.99664I$
$u=-0.710408-1.123780I$ $a=-0.072881-0.197480I$ $b=-1.171160-0.168197I$	$-16.1607+6.8649I$	$3.92588-3.99664I$
$u=-0.958522+1.029410I$ $a=-0.881055-1.083290I$ $b=\ \ 0.205727-1.202210I$	$-2.36145-4.18202I$	0
$u=-0.958522-1.029410I$ $a=-0.881055+1.083290I$ $b=\ \ 0.205727+1.202210I$	$-2.36145+4.18202I$	0
$u=-0.68503+1.28773I$ $a=\ \ 0.274506+1.250660I$ $b=-0.317094+1.299910I$	$-3.61146-3.57309I$	0
$u=-0.68503-1.28773I$ $a=\ \ 0.274506-1.250660I$ $b=-0.317094-1.299910I$	$-3.61146+3.57309I$	0
$u=\ \ 0.060370+0.511531I$ $a=\ \ 0.280864-0.578455I$ $b=-0.835944+0.134295I$	$0.840144+0.301601I$	$5.20449+2.88042I$
$u=\ \ 0.060370-0.511531I$ $a=\ \ 0.280864+0.578455I$ $b=-0.835944-0.134295I$	$0.840144-0.301601I$	$5.20449-2.88042I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.85204 + 1.41437I$ $a = -0.370591 + 1.342560I$ $b = 0.43395 + 1.41226I$	$-9.43948 + 8.71487I$	0
$u = 0.85204 - 1.41437I$ $a = -0.370591 - 1.342560I$ $b = 0.43395 - 1.41226I$	$-9.43948 - 8.71487I$	0
$u = -0.335045$ $a = -0.614690$ $b = -0.549698$	0.786782	11.7610
$u = -0.98641 + 1.38943I$ $a = 0.58183 + 1.36840I$ $b = -0.49379 + 1.44935I$	$18.1844 - 12.7063I$	0
$u = -0.98641 - 1.38943I$ $a = 0.58183 - 1.36840I$ $b = -0.49379 - 1.44935I$	$18.1844 + 12.7063I$	0
$u = 1.51194 + 1.37229I$ $a = 0.442968 - 1.000110I$ $b = -0.020088 - 1.263070I$	$-7.39813 + 0.94271I$	0
$u = 1.51194 - 1.37229I$ $a = 0.442968 + 1.000110I$ $b = -0.020088 + 1.263070I$	$-7.39813 - 0.94271I$	0
$u = -1.78660 + 1.18481I$ $a = -0.263303 - 0.886923I$ $b = -0.176813 - 1.330570I$	$-19.3360 + 3.0576I$	0
$u = -1.78660 - 1.18481I$ $a = -0.263303 + 0.886923I$ $b = -0.176813 + 1.330570I$	$-19.3360 - 3.0576I$	0

II. $I_2^u = \langle -206u^{15} + 554u^{14} + \cdots + 239b + 200,\ -339u^{15} + 914u^{14} + \cdots + 239a + 53,\ u^{16} - 3u^{15} + \cdots - u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 1.41841u^{15} - 3.82427u^{14} + \cdots + 1.41423u - 0.221757 \\ 0.861925u^{15} - 2.31799u^{14} + \cdots + 0.393305u - 0.836820 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.556485u^{15} - 1.50628u^{14} + \cdots + 1.02092u + 0.615063 \\ 0.861925u^{15} - 2.31799u^{14} + \cdots + 0.393305u - 0.836820 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.163180u^{15} - 0.351464u^{14} + \cdots + 2.17155u - 1.55649 \\ -0.288703u^{15} + 0.698745u^{14} + \cdots + 0.00418410u - 0.476987 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.55649u^{15} - 4.50628u^{14} + \cdots + 1.02092u - 0.384937 \\ 0.861925u^{15} - 2.31799u^{14} + \cdots + 1.39331u - 0.836820 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.94979u^{15} + 5.66109u^{14} + \cdots + 0.129707u - 1.78661 \\ -1.01255u^{15} + 2.33473u^{14} + \cdots - 1.78243u + 0.196653 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.192469u^{15} - 0.200837u^{14} + \cdots - 1.33054u - 0.317992 \\ -0.669456u^{15} + 1.51883u^{14} + \cdots - 1.06276u + 0.154812 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1.05858u^{15} - 2.89540u^{14} + \cdots + 0.317992u - 1.25105 \\ -0.949791u^{15} + 2.66109u^{14} + \cdots - 0.870293u + 1.21339 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.163180u^{15} + 0.351464u^{14} + \cdots - 2.17155u + 1.55649 \\ 0.288703u^{15} - 0.698745u^{14} + \cdots + 0.995816u + 1.47699 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.627615u^{15} - 0.736402u^{14} + \cdots + 2.12134u + 0.167364 \\ 0.899582u^{15} - 2.32218u^{14} + \cdots - 0.259414u - 0.426778 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{640}{239}u^{15} - \frac{1930}{239}u^{14} + \cdots - \frac{418}{239}u + \frac{91}{239}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16} - 13u^{15} + \cdots - 41u + 5$
c_2	$u^{16} + 3u^{15} + \cdots + u + 1$
c_3	$u^{16} + 5u^{14} + \cdots - 3u^2 + 1$
c_4	$u^{16} - u^{15} + \cdots - 3u + 1$
c_5	$u^{16} - 2u^{15} + \cdots - 8u + 5$
c_6	$u^{16} + 3u^{15} + \cdots - 4u + 1$
c_7, c_8	$u^{16} + 11u^{14} + \cdots - 5u^2 + 1$
c_9	$u^{16} + 2u^{15} + \cdots + 8u + 5$
c_{10}	$u^{16} - 3u^{15} + \cdots - u + 1$
c_{11}	$u^{16} + 11u^{14} + \cdots - 5u^2 + 1$
c_{12}	$u^{16} + 18u^{14} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{16} - 13y^{15} + \cdots + 129y + 25$
c_2	$y^{16} - 3y^{15} + \cdots - 7y + 1$
c_3	$y^{16} + 10y^{15} + \cdots - 6y + 1$
c_4	$y^{16} - y^{15} + \cdots + y + 1$
c_5, c_9	$y^{16} + 12y^{15} + \cdots + 36y + 25$
c_6	$y^{16} + 9y^{15} + \cdots - 4y + 1$
c_7, c_8, c_{11}	$y^{16} + 22y^{15} + \cdots - 10y + 1$
c_{10}	$y^{16} + y^{15} + \cdots - y + 1$
c_{12}	$y^{16} + 36y^{15} + \cdots - 12y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.691915 + 0.809476I$ $a = -0.141371 - 0.368878I$ $b = -0.809947 - 0.085174I$	$-2.46403 + 2.62444I$	$6.23068 - 3.19231I$
$u = 0.691915 - 0.809476I$ $a = -0.141371 + 0.368878I$ $b = -0.809947 + 0.085174I$	$-2.46403 - 2.62444I$	$6.23068 + 3.19231I$
$u = -0.478310 + 0.598570I$ $a = -0.352507 + 0.241067I$ $b = 0.747607 + 0.372629I$	$1.24171 - 1.01060I$	$10.47599 + 2.54040I$
$u = -0.478310 - 0.598570I$ $a = -0.352507 - 0.241067I$ $b = 0.747607 - 0.372629I$	$1.24171 + 1.01060I$	$10.47599 - 2.54040I$
$u = -0.872633 + 0.901161I$ $a = -0.799950 - 1.113870I$ $b = 0.339325 - 1.214060I$	$-1.62684 - 5.00252I$	$9.33881 + 6.54924I$
$u = -0.872633 - 0.901161I$ $a = -0.799950 + 1.113870I$ $b = 0.339325 + 1.214060I$	$-1.62684 + 5.00252I$	$9.33881 - 6.54924I$
$u = -0.703248 + 0.221002I$ $a = 2.55456 + 1.15105I$ $b = 0.251764 + 1.099540I$	$-17.1600 + 1.1139I$	$3.03838 + 0.31992I$
$u = -0.703248 - 0.221002I$ $a = 2.55456 - 1.15105I$ $b = 0.251764 - 1.099540I$	$-17.1600 - 1.1139I$	$3.03838 - 0.31992I$
$u = 0.542037 + 1.148350I$ $a = -0.32058 + 1.58789I$ $b = -0.133199 + 1.270610I$	$-6.21575 - 0.64132I$	$1.39512 + 0.82339I$
$u = 0.542037 - 1.148350I$ $a = -0.32058 - 1.58789I$ $b = -0.133199 - 1.270610I$	$-6.21575 + 0.64132I$	$1.39512 - 0.82339I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.184320 + 0.475109I$ $a = 0.127955 - 0.290498I$ $b = -0.260397 - 1.111540I$	$-5.27072 + 2.33003I$	$1.62272 - 2.90954I$
$u = 1.184320 - 0.475109I$ $a = 0.127955 + 0.290498I$ $b = -0.260397 + 1.111540I$	$-5.27072 - 2.33003I$	$1.62272 + 2.90954I$
$u = 0.723742 + 1.105120I$ $a = 0.66985 - 1.77346I$ $b = -0.376215 - 1.341420I$	$-6.97182 + 6.95095I$	$2.09201 - 4.98121I$
$u = 0.723742 - 1.105120I$ $a = 0.66985 + 1.77346I$ $b = -0.376215 + 1.341420I$	$-6.97182 - 6.95095I$	$2.09201 + 4.98121I$
$u = 0.412174 + 0.462048I$ $a = 0.26204 + 1.56067I$ $b = -0.758938 + 0.847429I$	$-4.30084 - 1.41489I$	$0.806284 + 0.154147I$
$u = 0.412174 - 0.462048I$ $a = 0.26204 - 1.56067I$ $b = -0.758938 - 0.847429I$	$-4.30084 + 1.41489I$	$0.806284 - 0.154147I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{16}-13u^{15}+\cdots-41u+5)(u^{39}+6u^{38}+\cdots+68813u-4453)$
c_2	$(u^{16}+3u^{15}+\cdots+u+1)(u^{39}+12u^{38}+\cdots+33u-1)$
c_3	$(u^{16}+5u^{14}+\cdots-3u^2+1)(u^{39}-u^{38}+\cdots-7950u-6379)$
c_4	$(u^{16}-u^{15}+\cdots-3u+1)(u^{39}-17u^{37}+\cdots+59051u-25039)$
c_5	$(u^{16}-2u^{15}+\cdots-8u+5)(u^{39}-3u^{38}+\cdots-8u-1)$
c_6	$(u^{16}+3u^{15}+\cdots-4u+1)(u^{39}-4u^{38}+\cdots+621578u-106361)$
c_7, c_8	$(u^{16}+11u^{14}+\cdots-5u^2+1)(u^{39}+u^{38}+\cdots+40u-13)$
c_9	$(u^{16}+2u^{15}+\cdots+8u+5)(u^{39}-3u^{38}+\cdots-8u-1)$
c_{10}	$(u^{16}-3u^{15}+\cdots-u+1)(u^{39}-4u^{38}+\cdots+95u-29)$
c_{11}	$(u^{16}+11u^{14}+\cdots-5u^2+1)(u^{39}+u^{38}+\cdots+40u-13)$
c_{12}	$(u^{16}+18u^{14}+\cdots+4u+1)(u^{39}-u^{38}+\cdots+1387526u-100009)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{16}-13y^{15}+\cdots+129y+25)$ $\cdot(y^{39}-86y^{38}+\cdots+1745564923y-19829209)$
c_2	$(y^{16}-3y^{15}+\cdots-7y+1)(y^{39}+12y^{38}+\cdots+2135y-1)$
c_3	$(y^{16}+10y^{15}+\cdots-6y+1)$ $\cdot(y^{39}+77y^{38}+\cdots-133130362y-40691641)$
c_4	$(y^{16}-y^{15}+\cdots+y+1)$ $\cdot(y^{39}-34y^{38}+\cdots+7818316899y-626951521)$
c_5, c_9	$(y^{16}+12y^{15}+\cdots+36y+25)(y^{39}+31y^{38}+\cdots+48y-1)$
c_6	$(y^{16}+9y^{15}+\cdots-4y+1)$ $\cdot(y^{39}+52y^{38}+\cdots+161820928428y-11312662321)$
c_7, c_8, c_{11}	$(y^{16}+22y^{15}+\cdots-10y+1)(y^{39}+61y^{38}+\cdots-4614y-169)$
c_{10}	$(y^{16}+y^{15}+\cdots-y+1)(y^{39}+12y^{38}+\cdots-9187y-841)$
c_{12}	$(y^{16}+36y^{15}+\cdots-12y+1)$ $\cdot(y^{39}+199y^{38}+\cdots-836738153944y-10001800081)$