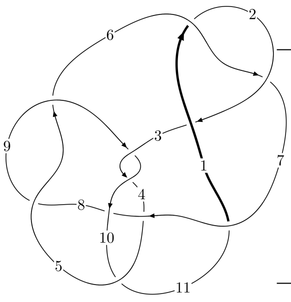
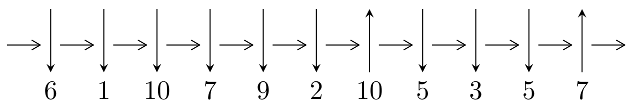
$11n_{144}$ ($K11n_{144}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I^u_1 &= \langle 19u^{18} - 215u^{17} + \cdots + 32b + 896,\ -14u^{18} + 191u^{17} + \cdots + 32a - 1760,\\
&\quad u^{19} - 15u^{18} + \cdots + 544u - 64\rangle\\
I^u_2 &= \langle -25111a^{11}u + 473518a^{10}u + \cdots - 96138a - 81801,\ a^{11}u - 6a^{10}u + \cdots - 155a + 167,\ u^2 + u - 1\rangle\\
I^u_3 &= \langle 3u^{10} + 8u^9 + u^8 - 3u^7 + 8u^6 - u^5 - u^4 + 3u^3 - 9u^2 + b + u - 1,\\
&\quad - u^{10} - u^9 + 4u^8 + u^7 - 5u^6 + 5u^5 - 2u^3 + 5u^2 + a - 5u + 1,\\
&\quad u^{11} + 4u^{10} + 4u^9 + 2u^7 + 3u^6 - u^5 + u^4 - 2u^3 - 4u^2 - 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 54 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. $\boldsymbol{I_1^u = \langle 19u^{18} - 215u^{17} + \cdots + 32b + 896,\ -14u^{18} + 191u^{17} + \cdots + 32a - 1760,\ u^{19} - 15u^{18} + \cdots + 544u - 64\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} \frac{7}{16}u^{18} - \frac{191}{32}u^{17} + \cdots - \frac{743}{2}u + 55 \\ -\frac{19}{32}u^{18} + \frac{215}{32}u^{17} + \cdots + 183u - 28 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -\frac{63}{64}u^{18} + \frac{883}{64}u^{17} + \cdots + \frac{1901}{4}u - 64 \\ \frac{31}{32}u^{18} - \frac{435}{32}u^{17} + \cdots - \frac{941}{2}u + 63 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -\frac{1}{64}u^{18} + \frac{13}{64}u^{17} + \cdots + \frac{19}{4}u - 1 \\ \frac{31}{32}u^{18} - \frac{435}{32}u^{17} + \cdots - \frac{941}{2}u + 63 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{5}{32}u^{18} + \frac{3}{4}u^{17} + \cdots - \frac{377}{2}u + 27 \\ -\frac{19}{32}u^{18} + \frac{215}{32}u^{17} + \cdots + 183u - 28 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -\frac{5}{32}u^{18} + \frac{3}{4}u^{17} + \cdots - \frac{377}{2}u + 27 \\ \frac{115}{32}u^{18} - \frac{1551}{32}u^{17} + \cdots - 674u + 74 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{307}{64}u^{18} - \frac{3931}{64}u^{17} + \cdots - \frac{3381}{4}u + 100 \\ -\frac{177}{32}u^{18} + \frac{2313}{32}u^{17} + \cdots + \frac{2457}{2}u - 149 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{137}{64}u^{18} + \frac{1597}{64}u^{17} + \cdots - 61u + \frac{37}{2} \\ \frac{339}{32}u^{18} - \frac{4473}{32}u^{17} + \cdots - 2502u + 303 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0156250u^{18} + 0.203125u^{17} + \cdots - 10.3750u^2 + 3.75000u \\ \frac{1}{32}u^{18} - \frac{13}{32}u^{17} + \cdots - \frac{15}{2}u + 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0156250u^{18} + 0.203125u^{17} + \cdots - 10.3750u^2 + 3.75000u \\ \frac{1}{32}u^{18} - \frac{13}{32}u^{17} + \cdots - \frac{15}{2}u + 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{107}{8}u^{18} + \frac{1433}{8}u^{17} + \cdots + 4122u - 534$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{19} - 5u^{18} + \cdots - 14u + 4$
c_2	$u^{19} + 9u^{18} + \cdots + 44u + 16$
c_3, c_5, c_8 c_9	$u^{19} + u^{18} + \cdots + 4u + 1$
c_4, c_{10}	$u^{19} + 15u^{17} + \cdots + 3u + 1$
c_7	$u^{19} + 15u^{18} + \cdots + 544u + 64$
c_{11}	$u^{19} - 15u^{18} + \cdots - 990u + 196$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{19} - 9y^{18} + \cdots + 44y - 16$
c_2	$y^{19} + 3y^{18} + \cdots + 2288y - 256$
c_3, c_5, c_8 c_9	$y^{19} - 9y^{18} + \cdots + 12y - 1$
c_4, c_{10}	$y^{19} + 30y^{18} + \cdots - 25y - 1$
c_7	$y^{19} - 11y^{18} + \cdots + 95232y - 4096$
c_{11}	$y^{19} + 3y^{18} + \cdots + 237260y - 38416$

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_1	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.068838 + 1.152610I$ $a = 0.509367 - 0.020838I$ $b = -0.059082 - 0.585665I$	$-1.40681 - 1.74274I$	$-5.94701 + 3.80028I$
$u = 0.068838 - 1.152610I$ $a = 0.509367 + 0.020838I$ $b = -0.059082 + 0.585665I$	$-1.40681 + 1.74274I$	$-5.94701 - 3.80028I$
$u = -0.655172 + 0.270735I$ $a = 0.180740 - 0.531477I$ $b = -0.025474 - 0.397141I$	$1.11792 - 1.95845I$	$-4.20644 + 5.46350I$
$u = -0.655172 - 0.270735I$ $a = 0.180740 + 0.531477I$ $b = -0.025474 + 0.397141I$	$1.11792 + 1.95845I$	$-4.20644 - 5.46350I$
$u = 1.244400 + 0.434239I$ $a = 0.558407 + 1.198070I$ $b = -0.17463 - 1.73336I$	$5.25710 - 1.54392I$	$-8.61355 - 2.51619I$
$u = 1.244400 - 0.434239I$ $a = 0.558407 - 1.198070I$ $b = -0.17463 + 1.73336I$	$5.25710 + 1.54392I$	$-8.61355 + 2.51619I$
$u = 0.525160 + 1.295010I$ $a = -0.477990 - 0.189359I$ $b = 0.005800 + 0.718444I$	$-5.26090 + 2.36693I$	$-9.94736 - 1.06990I$
$u = 0.525160 - 1.295010I$ $a = -0.477990 + 0.189359I$ $b = 0.005800 - 0.718444I$	$-5.26090 - 2.36693I$	$-9.94736 + 1.06990I$
$u = 1.37929 + 0.44772I$ $a = -0.340635 - 1.191440I$ $b = -0.06359 + 1.79584I$	$6.12748 + 4.38921I$	$-5.85287 - 6.32556I$
$u = 1.37929 - 0.44772I$ $a = -0.340635 + 1.191440I$ $b = -0.06359 - 1.79584I$	$6.12748 - 4.38921I$	$-5.85287 + 6.32556I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.07036 + 1.50415I$ $a = -0.374863 + 0.006918I$ $b = -0.015967 + 0.564338I$	$-4.57325 - 6.41400I$	$-8.03245 + 7.39287I$
$u = -0.07036 - 1.50415I$ $a = -0.374863 - 0.006918I$ $b = -0.015967 - 0.564338I$	$-4.57325 + 6.41400I$	$-8.03245 - 7.39287I$
$u = 1.57100 + 0.65066I$ $a = 0.118849 + 0.926036I$ $b = 0.41582 - 1.53213I$	$-1.49409 + 5.07243I$	$-11.25567 - 3.29320I$
$u = 1.57100 - 0.65066I$ $a = 0.118849 - 0.926036I$ $b = 0.41582 + 1.53213I$	$-1.49409 - 5.07243I$	$-11.25567 + 3.29320I$
$u = 1.63033 + 0.51703I$ $a = -0.023365 - 1.061980I$ $b = -0.51099 + 1.74346I$	$4.00668 + 8.26944I$	$-5.84435 - 4.36564I$
$u = 1.63033 - 0.51703I$ $a = -0.023365 + 1.061980I$ $b = -0.51099 - 1.74346I$	$4.00668 - 8.26944I$	$-5.84435 + 4.36564I$
$u = 1.69551 + 0.51970I$ $a = -0.052766 + 1.037060I$ $b = 0.62842 - 1.73093I$	$1.54987 + 13.80210I$	$-8.55217 - 7.85507I$
$u = 1.69551 - 0.51970I$ $a = -0.052766 - 1.037060I$ $b = 0.62842 + 1.73093I$	$1.54987 - 13.80210I$	$-8.55217 + 7.85507I$
$u = 0.222014$ $a = 1.80451$ $b = -0.400627$	-0.778408	-13.4960

II. $\boldsymbol{I_2^u = \langle -2.51\times 10^4 a^{11}u + 4.74\times 10^5 a^{10}u + \cdots - 9.61\times 10^4 a - 8.18\times 10^4,\ a^{11}u - 6a^{10}u + \cdots - 155a + 167,\ u^2+u-1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} a \\ 1.13517a^{11}u - 21.4058a^{10}u + \cdots + 4.34601a + 3.69789 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u-1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -a^2u \\ -35.3361a^{11}u - 18.9502a^{10}u + \cdots + 8.81063a + 0.563175 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -35.3361a^{11}u - 18.9502a^{10}u + \cdots + 8.81063a + 0.563175 \\ -35.3361a^{11}u - 18.9502a^{10}u + \cdots + 8.81063a + 0.563175 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.13517a^{11}u - 21.4058a^{10}u + \cdots + 5.34601a + 3.69789 \\ 1.13517a^{11}u - 21.4058a^{10}u + \cdots + 4.34601a + 3.69789 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.13517a^{11}u - 21.4058a^{10}u + \cdots + 5.34601a + 3.69789 \\ -1.83504a^{11}u + 34.6362a^{10}u + \cdots - 7.86737a - 8.59712 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 22.6625a^{11}u + 16.1085a^{10}u + \cdots - 7.94413a - 2.81597 \\ 18.9641a^{11}u + 15.2801a^{10}u + \cdots - 6.71073a - 2.33606 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 7.69685a^{11}u - 29.9099a^{10}u + \cdots + 6.05140a + 8.17657 \\ -4.02676a^{11}u - 39.3625a^{10}u + \cdots + 8.68333a + 9.01768 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -21.8411a^{11}u - 11.7229a^{10}u + \cdots + 4.19271a + 0.957552 \\ a^2u - a^2 + 2u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -21.8411a^{11}u - 11.7229a^{10}u + \cdots + 4.19271a + 0.957552 \\ a^2u - a^2 + 2u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{413176}{22121}a^{11}u - \frac{1916164}{22121}a^{10}u + \cdots + \frac{545276}{22121}a + \frac{178130}{22121}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)^4$
c_2, c_{11}	$(u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1)^4$
c_3, c_5, c_8 c_9	$u^{24} + u^{23} + \cdots + 94u + 29$
c_4, c_{10}	$u^{24} - u^{23} + \cdots + 166u + 79$
c_7	$(u^2 - u - 1)^{12}$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)^4$
c_2, c_{11}	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^4$
c_3, c_5, c_8 c_9	$y^{24} - 9y^{23} + \cdots - 8372y + 841$
c_4, c_{10}	$y^{24} + 15y^{23} + \cdots + 63136y + 6241$
c_7	$(y^2 - 3y + 1)^{12}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.618034$ $a = 0.378632 + 0.673935I$ $b = -1.387580 - 0.061682I$	$-2.05724 + 0.92430I$	$-4.28328 - 0.79423I$
$u = 0.618034$ $a = 0.378632 - 0.673935I$ $b = -1.387580 + 0.061682I$	$-2.05724 - 0.92430I$	$-4.28328 + 0.79423I$
$u = 0.618034$ $a = -0.347430 + 1.244240I$ $b = 1.52296 - 0.13510I$	$-3.94784 - 5.69302I$	$-8.00000 + 5.51057I$
$u = 0.618034$ $a = -0.347430 - 1.244240I$ $b = 1.52296 + 0.13510I$	$-3.94784 + 5.69302I$	$-8.00000 - 5.51057I$
$u = 0.618034$ $a = 0.812996 + 1.057280I$ $b = 1.195370 - 0.421798I$	$-5.83845 + 0.92430I$	$-11.71672 - 0.79423I$
$u = 0.618034$ $a = 0.812996 - 1.057280I$ $b = 1.195370 + 0.421798I$	$-5.83845 - 0.92430I$	$-11.71672 + 0.79423I$
$u = 0.618034$ $a = -1.93415 + 0.68248I$ $b = -0.502459 - 0.653436I$	$-5.83845 + 0.92430I$	$-11.71672 - 0.79423I$
$u = 0.618034$ $a = -1.93415 - 0.68248I$ $b = -0.502459 + 0.653436I$	$-5.83845 - 0.92430I$	$-11.71672 + 0.79423I$
$u = 0.618034$ $a = 2.24514 + 0.09980I$ $b = -0.234007 - 0.416515I$	$-2.05724 + 0.92430I$	$-4.28328 - 0.79423I$
$u = 0.618034$ $a = 2.24514 - 0.09980I$ $b = -0.234007 + 0.416515I$	$-2.05724 - 0.92430I$	$-4.28328 + 0.79423I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.618034$ $a = -2.46421 + 0.21859I$ $b = 0.214724 - 0.768984I$	$-3.94784 - 5.69302I$	$-8.00000 + 5.51057I$
$u = 0.618034$ $a = -2.46421 - 0.21859I$ $b = 0.214724 + 0.768984I$	$-3.94784 + 5.69302I$	$-8.00000 - 5.51057I$
$u = -1.61803$ $a = 0.086187 + 1.029040I$ $b = 0.47994 - 1.48236I$	$5.83845 + 0.92430I$	$-4.28328 - 0.79423I$
$u = -1.61803$ $a = 0.086187 - 1.029040I$ $b = 0.47994 + 1.48236I$	$5.83845 - 0.92430I$	$-4.28328 + 0.79423I$
$u = -1.61803$ $a = -0.417397 + 0.869872I$ $b = 0.01162 - 1.75281I$	$3.94784 + 5.69302I$	$-8.00000 - 5.51057I$
$u = -1.61803$ $a = -0.417397 - 0.869872I$ $b = 0.01162 + 1.75281I$	$3.94784 - 5.69302I$	$-8.00000 + 5.51057I$
$u = -1.61803$ $a = 0.296617 + 0.916149I$ $b = 0.13945 - 1.66501I$	$5.83845 - 0.92430I$	$-4.28328 + 0.79423I$
$u = -1.61803$ $a = 0.296617 - 0.916149I$ $b = 0.13945 + 1.66501I$	$5.83845 + 0.92430I$	$-4.28328 - 0.79423I$
$u = -1.61803$ $a = 0.007184 + 1.083300I$ $b = -0.67536 - 1.40748I$	$3.94784 - 5.69302I$	$-8.00000 + 5.51057I$
$u = -1.61803$ $a = 0.007184 - 1.083300I$ $b = -0.67536 + 1.40748I$	$3.94784 + 5.69302I$	$-8.00000 - 5.51057I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.61803$ $a = \quad 0.051210 + 0.866179I$ $b = -0.347529 - 0.990805I$	$2.05724 + 0.92430I$	$-11.71672 - 0.79423I$
$u = -1.61803$ $a = \quad 0.051210 - 0.866179I$ $b = -0.347529 + 0.990805I$	$2.05724 - 0.92430I$	$-11.71672 + 0.79423I$
$u = -1.61803$ $a = -0.214785 + 0.612351I$ $b = \quad 0.082860 - 1.401510I$	$2.05724 - 0.92430I$	$-11.71672 + 0.79423I$
$u = -1.61803$ $a = -0.214785 - 0.612351I$ $b = \quad 0.082860 + 1.401510I$	$2.05724 + 0.92430I$	$-11.71672 - 0.79423I$

III.

$$\boldsymbol{I^u_3 = \langle 3u^{10}+8u^9+\cdots+b-1,\ -u^{10}-u^9+\cdots+a+1,\ u^{11}+4u^{10}+\cdots-4u^2-1\rangle}$$

(i) Arc colorings

$$a_7 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_5 = \begin{pmatrix}u^{10}+u^9-4u^8-u^7+5u^6-5u^5+2u^3-5u^2+5u-1\\-3u^{10}-8u^9-u^8+3u^7-8u^6+u^5+u^4-3u^3+9u^2-u+1\end{pmatrix}$$

$$a_8 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

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

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

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

$$a_3 = \begin{pmatrix}-2u^{10}-7u^9-5u^8+2u^7-3u^6-4u^5+u^4-u^3+4u^2+4u\\-2u^{10}-6u^9-2u^8+3u^7-4u^6-u^5+2u^4-u^3+5u^2+u\end{pmatrix}$$

$$a_2 = \begin{pmatrix}-2u^{10}-6u^9-3u^8-5u^6-2u^4-3u^3+7u^2+u+2\\u^{10}+2u^9-u^8+4u^6-2u^5+u^3-3u^2+2u-1\end{pmatrix}$$

$$a_6 = \begin{pmatrix}2u^{10}+5u^9-u^8-4u^7+6u^6-2u^4+3u^3-5u^2+u+1\\-2u^{10}-6u^9-3u^8-5u^6-u^4-u^3+7u^2+2\end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 5u^{10}+14u^9+3u^8-4u^7+15u^6+u^5+2u^4+4u^3-15u^2+3u-16$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.658661 + 0.780836I$ $a = 0.334333 - 0.641044I$ $b = 0.720763 - 0.161171I$	$-6.99914 + 2.24617I$	$-15.2425 - 3.4100I$
$u = 0.658661 - 0.780836I$ $a = 0.334333 + 0.641044I$ $b = 0.720763 + 0.161171I$	$-6.99914 - 2.24617I$	$-15.2425 + 3.4100I$
$u = -0.071195 + 0.899946I$ $a = -0.435703 - 0.871171I$ $b = 0.815027 - 0.330086I$	$-5.80784 - 5.68354I$	$-14.5040 + 4.4186I$
$u = -0.071195 - 0.899946I$ $a = -0.435703 + 0.871171I$ $b = 0.815027 + 0.330086I$	$-5.80784 + 5.68354I$	$-14.5040 - 4.4186I$
$u = 0.895531$ $a = -0.811062$ $b = -0.726331$	-4.44260	-6.63260
$u = -1.345990 + 0.064656I$ $a = 0.175003 - 1.238530I$ $b = -0.15547 + 1.67836I$	$5.44803 + 2.65181I$	$-6.56642 - 4.06839I$
$u = -1.345990 - 0.064656I$ $a = 0.175003 + 1.238530I$ $b = -0.15547 - 1.67836I$	$5.44803 - 2.65181I$	$-6.56642 + 4.06839I$
$u = 0.049939 + 0.484753I$ $a = 0.21633 + 1.89590I$ $b = -0.908242 + 0.199545I$	$-3.30665 - 0.86798I$	$-12.51115 + 0.41084I$
$u = 0.049939 - 0.484753I$ $a = 0.21633 - 1.89590I$ $b = -0.908242 - 0.199545I$	$-3.30665 + 0.86798I$	$-12.51115 - 0.41084I$
$u = -1.73918 + 0.14158I$ $a = 0.115568 - 0.650407I$ $b = -0.108908 + 1.147540I$	$3.01730 - 1.31614I$	$-1.85963 + 5.09190I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.73918 - 0.14158I$ $a = \quad 0.115568 + 0.650407I$ $b = -0.108908 - 1.147540I$	$3.01730 + 1.31614I$	$-1.85963 - 5.09190I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^6+u^5-u^4-2u^3+u+1)^4$ $\cdot(u^{11}-3u^9+\cdots-2u^2+1)(u^{19}-5u^{18}+\cdots-14u+4)$
c_2	$((u^6+3u^5+5u^4+4u^3+2u^2+u+1)^4)(u^{11}+6u^{10}+\cdots+4u+1)$ $\cdot(u^{19}+9u^{18}+\cdots+44u+16)$
c_3, c_8	$(u^{11}-u^{10}-3u^9+3u^8+2u^7-u^6+u^5-3u^4-u^3+2u^2+1)$ $\cdot(u^{19}+u^{18}+\cdots+4u+1)(u^{24}+u^{23}+\cdots+94u+29)$
c_4, c_{10}	$(u^{11}+2u^9+u^8-3u^7-u^6-u^5-2u^4+3u^3+3u^2-u-1)$ $\cdot(u^{19}+15u^{17}+\cdots+3u+1)(u^{24}-u^{23}+\cdots+166u+79)$
c_5, c_9	$(u^{11}+u^{10}-3u^9-3u^8+2u^7+u^6+u^5+3u^4-u^3-2u^2-1)$ $\cdot(u^{19}+u^{18}+\cdots+4u+1)(u^{24}+u^{23}+\cdots+94u+29)$
c_6	$(u^6+u^5-u^4-2u^3+u+1)^4$ $\cdot(u^{11}-3u^9+\cdots+2u^2-1)(u^{19}-5u^{18}+\cdots-14u+4)$
c_7	$(u^2-u-1)^{12}(u^{11}+4u^{10}+4u^9+2u^7+3u^6-u^5+u^4-2u^3-4u^2-1)$ $\cdot(u^{19}+15u^{18}+\cdots+544u+64)$
c_{11}	$(u^6+3u^5+5u^4+4u^3+2u^2+u+1)^4$ $\cdot(u^{11}+u^9+4u^8+u^7+8u^5-5u^4+9u^3-3u^2+1)$ $\cdot(u^{19}-15u^{18}+\cdots-990u+196)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$((y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)^4)(y^{11} - 6y^{10} + \cdots + 4y - 1)$ $\cdot (y^{19} - 9y^{18} + \cdots + 44y - 16)$
c_2	$((y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^4)(y^{11} + 2y^{10} + \cdots + 4y - 1)$ $\cdot (y^{19} + 3y^{18} + \cdots + 2288y - 256)$
c_3, c_5, c_8 c_9	$(y^{11} - 7y^{10} + \cdots - 4y - 1)(y^{19} - 9y^{18} + \cdots + 12y - 1)$ $\cdot (y^{24} - 9y^{23} + \cdots - 8372y + 841)$
c_4, c_{10}	$(y^{11} + 4y^{10} + \cdots + 7y - 1)(y^{19} + 30y^{18} + \cdots - 25y - 1)$ $\cdot (y^{24} + 15y^{23} + \cdots + 63136y + 6241)$
c_7	$((y^2 - 3y + 1)^{12})(y^{11} - 8y^{10} + \cdots - 8y - 1)$ $\cdot (y^{19} - 11y^{18} + \cdots + 95232y - 4096)$
c_{11}	$((y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^4)(y^{11} + 2y^{10} + \cdots + 6y - 1)$ $\cdot (y^{19} + 3y^{18} + \cdots + 237260y - 38416)$