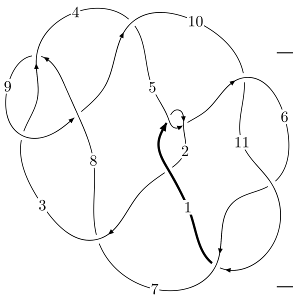
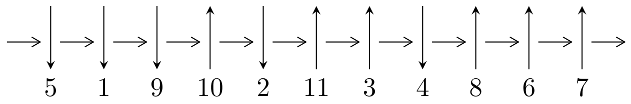
$11a_{108}$ ($K11a_{108}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle -4u^{40} + 4u^{39} + \cdots + 4b + 4,\ -2u^{40} + 4u^{39} + \cdots + 4a - 2,\ u^{41} - 2u^{40} + \cdots - 4u + 2 \rangle \\
I_2^u &= \langle 46u^4a^2 + 10u^4a + \cdots - 33a + 56, \\
&\quad - 2u^3a^2 - u^4a - 2a^2u^2 + 2u^3a + 3u^4 + a^3 - 2a^2u + u^2a + u^3 - 2a^2 + au + 2u^2 + 2a + 3u + 1, \\
&\quad u^5 + u^4 + 2u^3 + u^2 + u + 1 \rangle \\
I_3^u &= \langle u^3 + b + u - 1,\ u^3 - 2u^2 + 2a - 4,\ u^4 + 2u^2 + 2 \rangle \\
\\
I_1^v &= \langle a,\ b + 1,\ v - 1 \rangle
\end{aligned}$$

* 4 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. $I^u_1 =$
$\langle -4u^{40}+4u^{39}+\cdots+4b+4,\ -2u^{40}+4u^{39}+\cdots+4a-2,\ u^{41}-2u^{40}+\cdots-4u+2\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}\frac{1}{2}u^{40} - u^{39} + \cdots + \frac{1}{2}u + \frac{1}{2}\\ u^{40} - u^{39} + \cdots + \frac{1}{2}u - 1\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-\frac{1}{4}u^{33} - 2u^{31} + \cdots - \frac{1}{2}u^3 + 1\\ \frac{1}{4}u^{35} + \frac{9}{4}u^{33} + \cdots - \frac{3}{2}u^2 - \frac{1}{2}u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u^3\\u^3+u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u^6 - u^4 + 1\\-u^6 - 2u^4 - u^2\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u^3\\u^5 + u^3 + u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-\frac{1}{4}u^{36} - \frac{9}{4}u^{34} + \cdots - \frac{1}{2}u + \frac{1}{2}\\ -\frac{1}{4}u^{36} - \frac{5}{2}u^{34} + \cdots - \frac{1}{2}u^2 - u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-\frac{1}{4}u^{36} - \frac{9}{4}u^{34} + \cdots - \frac{1}{2}u + \frac{1}{2}\\ \frac{1}{4}u^{38} + \frac{5}{2}u^{36} + \cdots + u^3 + u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-\frac{1}{4}u^{36} - \frac{9}{4}u^{34} + \cdots - \frac{1}{2}u + \frac{1}{2}\\ \frac{1}{4}u^{38} + \frac{5}{2}u^{36} + \cdots + u^3 + u\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= 2u^{40} - 4u^{39} + 22u^{38} - 40u^{37} + 114u^{36} - 196u^{35} + 364u^{34} - 604u^{33} + 786u^{32} - 1280u^{31} + 1188u^{30} - 1918u^{29} + 1256u^{28} - 1996u^{27} + 904u^{26} - 1290u^{25} + 434u^{24} - 232u^{23} + 184u^{22} + 468u^{21} + 136u^{20} + 520u^{19} + 84u^{18} + 194u^{17} + 4u^{16} - 120u^{15} - 4u^{14} - 258u^{13} + 52u^{12} - 234u^{11} + 84u^{10} - 128u^9 + 90u^8 - 30u^7 + 64u^6 + 2u^5 + 24u^4 - 10u^3 - 4u^2 - 2u$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{41} + 2u^{40} + \cdots + 5u - 1$
c_2	$u^{41} + 14u^{40} + \cdots + u + 1$
c_3, c_8	$u^{41} + 2u^{40} + \cdots - 4u - 2$
c_4, c_7	$u^{41} - 2u^{40} + \cdots - 24u - 16$
c_6, c_{10}, c_{11}	$u^{41} - 2u^{40} + \cdots - 7u - 1$
c_9	$u^{41} - 22u^{40} + \cdots + 8u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{41} - 14y^{40} + \cdots + y - 1$
c_2	$y^{41} + 34y^{40} + \cdots + 737y - 1$
c_3, c_8	$y^{41} + 22y^{40} + \cdots + 8y - 4$
c_4, c_7	$y^{41} - 34y^{40} + \cdots - 16448y - 256$
c_6, c_{10}, c_{11}	$y^{41} - 46y^{40} + \cdots - 47y - 1$
c_9	$y^{41} - 6y^{40} + \cdots + 160y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.503278 + 0.876227I$ $a = -1.01864 - 1.35377I$ $b = -0.184951 - 0.697202I$	$-1.85795 + 5.19311I$	$-2.06190 - 8.35313I$
$u = -0.503278 - 0.876227I$ $a = -1.01864 + 1.35377I$ $b = -0.184951 + 0.697202I$	$-1.85795 - 5.19311I$	$-2.06190 + 8.35313I$
$u = 0.595879 + 0.924278I$ $a = -1.261860 + 0.541147I$ $b = -0.683532 + 0.365288I$	$3.43135 - 8.38206I$	$3.46275 + 8.23571I$
$u = 0.595879 - 0.924278I$ $a = -1.261860 - 0.541147I$ $b = -0.683532 - 0.365288I$	$3.43135 + 8.38206I$	$3.46275 - 8.23571I$
$u = 0.012198 + 0.896132I$ $a = 1.24032 + 1.28683I$ $b = 0.765320 + 0.507138I$	$1.35320 - 1.46651I$	$7.22861 + 4.90542I$
$u = 0.012198 - 0.896132I$ $a = 1.24032 - 1.28683I$ $b = 0.765320 - 0.507138I$	$1.35320 + 1.46651I$	$7.22861 - 4.90542I$
$u = 0.662080 + 0.589897I$ $a = 0.314575 + 0.870590I$ $b = 0.143067 + 0.847335I$	$2.46953 + 3.52956I$	$2.12209 - 2.66433I$
$u = 0.662080 - 0.589897I$ $a = 0.314575 - 0.870590I$ $b = 0.143067 - 0.847335I$	$2.46953 - 3.52956I$	$2.12209 + 2.66433I$
$u = -0.860560 + 0.141859I$ $a = -0.542033 + 0.556076I$ $b = -0.51707 - 2.21472I$	$7.79923 - 9.18843I$	$3.80065 + 5.17633I$
$u = -0.860560 - 0.141859I$ $a = -0.542033 - 0.556076I$ $b = -0.51707 + 2.21472I$	$7.79923 + 9.18843I$	$3.80065 - 5.17633I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.861859 + 0.085768I$ $a = 0.673275 + 0.352479I$ $b = 0.26299 - 1.41656I$	$9.69240 + 2.90753I$	$6.01430 - 0.84016I$
$u = 0.861859 - 0.085768I$ $a = 0.673275 - 0.352479I$ $b = 0.26299 + 1.41656I$	$9.69240 - 2.90753I$	$6.01430 + 0.84016I$
$u = -0.053677 + 1.146820I$ $a = 0.37845 - 1.62203I$ $b = 0.571996 - 0.725064I$	$8.20281 + 2.94250I$	$9.69079 - 2.88880I$
$u = -0.053677 - 1.146820I$ $a = 0.37845 + 1.62203I$ $b = 0.571996 + 0.725064I$	$8.20281 - 2.94250I$	$9.69079 + 2.88880I$
$u = -0.547888 + 1.013950I$ $a = 1.410510 - 0.051509I$ $b = 1.097590 + 0.770395I$	$4.68586 + 3.37196I$	$6.53621 - 2.75945I$
$u = -0.547888 - 1.013950I$ $a = 1.410510 + 0.051509I$ $b = 1.097590 - 0.770395I$	$4.68586 - 3.37196I$	$6.53621 + 2.75945I$
$u = -0.423966 + 1.085320I$ $a = 0.889067 - 0.156517I$ $b = 1.100080 + 0.649290I$	$4.21251 + 3.60145I$	$9.92786 - 4.45844I$
$u = -0.423966 - 1.085320I$ $a = 0.889067 + 0.156517I$ $b = 1.100080 - 0.649290I$	$4.21251 - 3.60145I$	$9.92786 + 4.45844I$
$u = -0.683105 + 0.455196I$ $a = 0.331321 + 0.649818I$ $b = -0.675612 + 0.983763I$	$3.06237 + 1.36624I$	$3.26071 - 2.82351I$
$u = -0.683105 - 0.455196I$ $a = 0.331321 - 0.649818I$ $b = -0.675612 - 0.983763I$	$3.06237 - 1.36624I$	$3.26071 + 2.82351I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.800093 + 0.101020I$ $a = -0.166855 - 0.995960I$ $b = -0.60540 + 1.90379I$	$1.51266 + 5.04411I$	$1.12155 - 5.34007I$
$u = 0.800093 - 0.101020I$ $a = -0.166855 + 0.995960I$ $b = -0.60540 - 1.90379I$	$1.51266 - 5.04411I$	$1.12155 + 5.34007I$
$u = -0.500958 + 0.624025I$ $a = -0.051668 - 0.512607I$ $b = -0.589638 - 0.765864I$	$-2.57302 - 1.04199I$	$-5.23599 + 1.20683I$
$u = -0.500958 - 0.624025I$ $a = -0.051668 + 0.512607I$ $b = -0.589638 + 0.765864I$	$-2.57302 + 1.04199I$	$-5.23599 - 1.20683I$
$u = 0.465698 + 1.112630I$ $a = 1.14618 + 1.00180I$ $b = 1.113240 - 0.021535I$	$0.77731 - 3.72567I$	$-1.87519 + 3.76789I$
$u = 0.465698 - 1.112630I$ $a = 1.14618 - 1.00180I$ $b = 1.113240 + 0.021535I$	$0.77731 + 3.72567I$	$-1.87519 - 3.76789I$
$u = 0.405488 + 1.211450I$ $a = 1.31179 - 1.91130I$ $b = -0.56018 - 2.51021I$	$5.40261 + 0.90249I$	$5.70583 - 2.02309I$
$u = 0.405488 - 1.211450I$ $a = 1.31179 + 1.91130I$ $b = -0.56018 + 2.51021I$	$5.40261 - 0.90249I$	$5.70583 + 2.02309I$
$u = 0.497123 + 1.201300I$ $a = -0.84019 + 2.50910I$ $b = 1.40879 + 2.64017I$	$4.75069 - 9.79224I$	$4.22259 + 8.17334I$
$u = 0.497123 - 1.201300I$ $a = -0.84019 - 2.50910I$ $b = 1.40879 - 2.64017I$	$4.75069 + 9.79224I$	$4.22259 - 8.17334I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.373001+1.250030I$ $a=\ \ 1.33745+1.92758I$ $b=-0.56709+2.23140I$	$12.10740-4.99417I$	$8.18458+2.23571I$
$u=-0.373001-1.250030I$ $a=\ \ 1.33745-1.92758I$ $b=-0.56709-2.23140I$	$12.10740+4.99417I$	$8.18458-2.23571I$
$u=\ \ 0.410502+1.250480I$ $a=-0.850292+1.066310I$ $b=\ \ 0.602301+1.153840I$	$13.77940-1.51388I$	$9.75388+2.25000I$
$u=\ \ 0.410502-1.250480I$ $a=-0.850292-1.066310I$ $b=\ \ 0.602301-1.153840I$	$13.77940+1.51388I$	$9.75388-2.25000I$
$u=-0.526084+1.215280I$ $a=-1.27954-2.55127I$ $b=\ \ 0.88088-2.96625I$	$11.0125+14.2368I$	$6.63638-8.24449I$
$u=-0.526084-1.215280I$ $a=-1.27954+2.55127I$ $b=\ \ 0.88088+2.96625I$	$11.0125-14.2368I$	$6.63638+8.24449I$
$u=\ \ 0.502214+1.228010I$ $a=\ \ 0.78343-1.80145I$ $b=-0.41247-2.19576I$	$13.1184-7.8365I$	$8.99343+4.06275I$
$u=\ \ 0.502214-1.228010I$ $a=\ \ 0.78343+1.80145I$ $b=-0.41247+2.19576I$	$13.1184+7.8365I$	$8.99343-4.06275I$
$u=\ \ 0.526691+0.260209I$ $a=\ \ 0.059135-0.159552I$ $b=-0.942509-0.266856I$	$-1.66678-0.31810I$	$-5.86833+0.81571I$
$u=\ \ 0.526691-0.260209I$ $a=\ \ 0.059135+0.159552I$ $b=-0.942509+0.266856I$	$-1.66678+0.31810I$	$-5.86833-0.81571I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.534614$ $a=\quad 1.27118$ $b=-0.415627$	1.42690	6.75840

II. $\boldsymbol{I_2^u = \langle 46u^4a^2 + 10u^4a + \cdots - 33a + 56,\ -u^4a + 3u^4 + \cdots + 2a + 1,\ u^5 + u^4 + 2u^3 + u^2 + u + 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} a \\ -0.630137a^2u^4 - 0.136986au^4 + \cdots + 0.452055a - 0.767123 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.328767a^2u^4 - 0.232877au^4 + \cdots + 0.0684932a + 1.09589 \\ -0.739726a^2u^4 + 0.273973au^4 + \cdots + 1.09589a - 0.465753 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^3 \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^3 \\ -u^4 - u^3 - u^2 - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^3 \\ -u^4 - u^3 - u^2 - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.328767a^2u^4 - 0.232877au^4 + \cdots + 0.0684932a + 1.09589 \\ -0.739726a^2u^4 + 0.273973au^4 + \cdots + 1.09589a - 0.465753 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.328767a^2u^4 - 0.232877au^4 + \cdots + 0.0684932a + 1.09589 \\ 1.21918a^2u^4 - 0.821918au^4 + \cdots - 1.28767a + 1.39726 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.328767a^2u^4 - 0.232877au^4 + \cdots + 0.0684932a + 1.09589 \\ 1.21918a^2u^4 - 0.821918au^4 + \cdots - 1.28767a + 1.39726 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^3 + 4u^2 + 4u + 6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.339110 + 0.822375I$ $a = 0.987461 - 0.368120I$ $b = 0.550313 - 0.577492I$	$0.32910 - 1.53058I$	$2.51511 + 4.43065I$
$u = 0.339110 + 0.822375I$ $a = -0.519621 - 0.051702I$ $b = -1.65077 + 0.68097I$	$0.32910 - 1.53058I$	$2.51511 + 4.43065I$
$u = 0.339110 + 0.822375I$ $a = -0.21028 + 2.63515I$ $b = 0.480628 + 0.996348I$	$0.32910 - 1.53058I$	$2.51511 + 4.43065I$
$u = 0.339110 - 0.822375I$ $a = 0.987461 + 0.368120I$ $b = 0.550313 + 0.577492I$	$0.32910 + 1.53058I$	$2.51511 - 4.43065I$
$u = 0.339110 - 0.822375I$ $a = -0.519621 + 0.051702I$ $b = -1.65077 - 0.68097I$	$0.32910 + 1.53058I$	$2.51511 - 4.43065I$
$u = 0.339110 - 0.822375I$ $a = -0.21028 - 2.63515I$ $b = 0.480628 - 0.996348I$	$0.32910 + 1.53058I$	$2.51511 - 4.43065I$
$u = -0.766826$ $a = 0.584967 + 0.856589I$ $b = -0.40069 - 1.38845I$	2.40108	3.48110
$u = -0.766826$ $a = 0.584967 - 0.856589I$ $b = -0.40069 + 1.38845I$	2.40108	3.48110
$u = -0.766826$ $a = -0.429363$ $b = -1.63410$	2.40108	3.48110
$u = -0.455697 + 1.200150I$ $a = -0.33284 - 1.93140I$ $b = 1.58159 - 1.67595I$	$5.87256 + 4.40083I$	$6.74431 - 3.49859I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.455697 + 1.200150I$ $a = \quad 1.19834 + 1.66866I$ $b = -0.22205 + 2.42247I$	$5.87256 + 4.40083I$	$6.74431 - 3.49859I$
$u = -0.455697 + 1.200150I$ $a = \quad 1.50666 - 1.48655I$ $b = \quad 1.47803 - 0.30819I$	$5.87256 + 4.40083I$	$6.74431 - 3.49859I$
$u = -0.455697 - 1.200150I$ $a = -0.33284 + 1.93140I$ $b = \quad 1.58159 + 1.67595I$	$5.87256 - 4.40083I$	$6.74431 + 3.49859I$
$u = -0.455697 - 1.200150I$ $a = \quad 1.19834 - 1.66866I$ $b = -0.22205 - 2.42247I$	$5.87256 - 4.40083I$	$6.74431 + 3.49859I$
$u = -0.455697 - 1.200150I$ $a = \quad 1.50666 + 1.48655I$ $b = \quad 1.47803 + 0.30819I$	$5.87256 - 4.40083I$	$6.74431 + 3.49859I$

III. $I_3^u = \langle u^3 + b + u - 1,\ u^3 - 2u^2 + 2a - 4,\ u^4 + 2u^2 + 2\rangle$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -\frac{1}{2}u^3 + u^2 + 2 \\ -u^3 - u + 1 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} -\frac{1}{2}u^3 + u^2 + 3 \\ -u^3 - u^2 - u + 1 \end{pmatrix}$$

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

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

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

$$a_7 = \begin{pmatrix} -u^3 \\ -u^3 - u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{1}{2}u^3 + u^2 + 2 \\ 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{1}{2}u^3 + u^2 + 2 \\ -u^3 - u + 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{1}{2}u^3 + u^2 + 2 \\ -u^3 - u + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u^2 + 8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_{10} c_{11}	$(u+1)^4$
c_3, c_8	$u^4 + 2u^2 + 2$
c_4, c_7	$u^4 - 2u^2 + 2$
c_5, c_6	$(u-1)^4$
c_9	$(u^2 - 2u + 2)^2$

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.455090 + 1.098680I$ $a = 1.77689 + 1.32180I$ $b = 2.09868 - 0.45509I$	$2.46740 - 3.66386I$	$4.00000 + 4.00000I$
$u = 0.455090 - 1.098680I$ $a = 1.77689 - 1.32180I$ $b = 2.09868 + 0.45509I$	$2.46740 + 3.66386I$	$4.00000 - 4.00000I$
$u = -0.455090 + 1.098680I$ $a = 0.223113 - 0.678203I$ $b = -0.098684 - 0.455090I$	$2.46740 + 3.66386I$	$4.00000 - 4.00000I$
$u = -0.455090 - 1.098680I$ $a = 0.223113 + 0.678203I$ $b = -0.098684 + 0.455090I$	$2.46740 - 3.66386I$	$4.00000 + 4.00000I$

IV. $I_1^v = \langle a,\ b+1,\ v-1 \rangle$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

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

$$a_6 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}, c_{11}	$u-1$
c_2, c_5, c_6	$u+1$
c_3, c_4, c_7 c_8, c_9	u

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_6, c_{10}, c_{11}	$y-1$
c_3, c_4, c_7 c_8, c_9	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 1.00000$		
$a = 0$	0	0
$b = -1.00000$		

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u+1)^4(u^{15}-5u^{13}+\cdots-u+1)(u^{41}+2u^{40}+\cdots+5u-1)$
c_2	$((u+1)^5)(u^{15}+10u^{14}+\cdots-u+1)(u^{41}+14u^{40}+\cdots+u+1)$
c_3, c_8	$u(u^4+2u^2+2)(u^5-u^4+\cdots+u-1)^3(u^{41}+2u^{40}+\cdots-4u-2)$
c_4, c_7	$u(u^4-2u^2+2)(u^5+u^4-2u^3-u^2+u-1)^3$ $\cdot(u^{41}-2u^{40}+\cdots-24u-16)$
c_5	$((u-1)^4)(u+1)(u^{15}-5u^{13}+\cdots-u+1)(u^{41}+2u^{40}+\cdots+5u-1)$
c_6	$((u-1)^4)(u+1)(u^{15}-5u^{13}+\cdots-u+1)(u^{41}-2u^{40}+\cdots-7u-1)$
c_9	$u(u^2-2u+2)^2(u^5-3u^4+4u^3-u^2-u+1)^3$ $\cdot(u^{41}-22u^{40}+\cdots+8u+4)$
c_{10}, c_{11}	$(u-1)(u+1)^4(u^{15}-5u^{13}+\cdots-u+1)(u^{41}-2u^{40}+\cdots-7u-1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$((y-1)^5)(y^{15}-10y^{14}+\cdots-y-1)(y^{41}-14y^{40}+\cdots+y-1)$
c_2	$((y-1)^5)(y^{15}-10y^{14}+\cdots-y-1)(y^{41}+34y^{40}+\cdots+737y-1)$
c_3, c_8	$y(y^2+2y+2)^2(y^5+3y^4+4y^3+y^2-y-1)^3$ $\cdot\,(y^{41}+22y^{40}+\cdots+8y-4)$
c_4, c_7	$y(y^2-2y+2)^2(y^5-5y^4+8y^3-3y^2-y-1)^3$ $\cdot\,(y^{41}-34y^{40}+\cdots-16448y-256)$
c_6, c_{10}, c_{11}	$((y-1)^5)(y^{15}-10y^{14}+\cdots-y-1)(y^{41}-46y^{40}+\cdots-47y-1)$
c_9	$y(y^2+4)^2(y^5-y^4+8y^3-3y^2+3y-1)^3$ $\cdot\,(y^{41}-6y^{40}+\cdots+160y-16)$