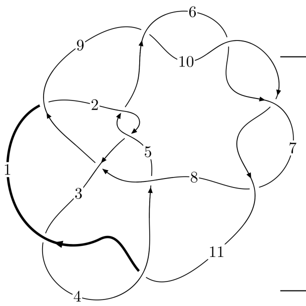
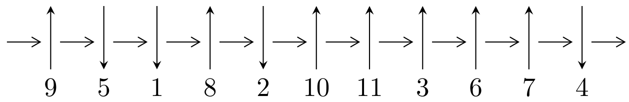
$11a_{293}$ ($K11a_{293}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle 913u^{13} + 2065u^{12} + \cdots + 8482b + 8631,\ -2839u^{13} - 4303u^{12} + \cdots + 8482a - 12824, \\
&\quad u^{14} - 8u^{12} + u^{11} + 22u^{10} - 6u^9 - 21u^8 + 8u^7 - 3u^6 + 10u^5 + 15u^4 - 16u^3 - u^2 + 3u - 1\rangle \\
I_2^u &= \langle 6u^{11}a + 15u^{11} + \cdots - 8a + 49,\ -6u^{11}a + 24u^{11} + \cdots - 16a + 61, \\
&\quad u^{12} + 2u^{11} - 6u^{10} - 13u^9 + 10u^8 + 27u^7 - u^6 - 19u^5 - 7u^4 + 3u^3 + 5u^2 + 4u + 1\rangle \\
I_3^u &= \langle -u^3 - u^2 + b + 2u + 3,\ 3u^3 + 2u^2 + 4a - 7u - 7,\ u^4 + 2u^3 - u^2 - 5u - 4\rangle \\
I_4^u &= \langle b + a - 1,\ a^2 - a + 2,\ u - 1\rangle \\
I_5^u &= \langle b + 1,\ 2a - 1,\ u^2 - u - 1\rangle \\
I_6^u &= \langle 2b + a - 1,\ a^2 - 2a + 5,\ u + 1\rangle
\end{aligned}$$

* 6 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 48 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. $\boldsymbol{I^u_1 = \langle 913u^{13} + 2065u^{12} + \cdots + 8482b + 8631,\ -2839u^{13} - 4303u^{12} + \cdots + 8482a - 12824,\ u^{14} - 8u^{12} + \cdots + 3u - 1\rangle}$

(i) Arc colorings

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

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

$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.334709u^{13} + 0.507310u^{12} + \cdots - 4.54692u + 1.51191 \\ -0.107640u^{13} - 0.243457u^{12} + \cdots + 0.643480u - 1.01757 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.319264u^{13} + 0.439519u^{12} + \cdots - 2.93433u + 1.63535 \\ -0.298750u^{13} - 0.387644u^{12} + \cdots + 1.39165u - 0.986324 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.910988u^{13} + 0.884108u^{12} + \cdots - 6.82056u + 2.65798 \\ -0.596793u^{13} - 0.428672u^{12} + \cdots + 1.81632u - 1.79510 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.510257u^{13} + 0.525937u^{12} + \cdots - 4.02134u + 2.07451 \\ -0.216576u^{13} - 0.122377u^{12} + \cdots + 0.559774u - 0.860646 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} 0.546805u^{13} + 0.434449u^{12} + \cdots - 3.98243u + 1.24805 \\ -0.319736u^{13} - 0.170597u^{12} + \cdots + 0.0789908u - 0.753714 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.546805u^{13} + 0.434449u^{12} + \cdots - 3.98243u + 1.24805 \\ -0.319736u^{13} - 0.170597u^{12} + \cdots + 0.0789908u - 0.753714 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{16306}{4241}u^{13} + \frac{88645}{16964}u^{12} + \cdots - \frac{152282}{4241}u + \frac{157881}{16964}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$4(4u^{14} - 22u^{13} + \cdots - 12u + 2)$
c_2, c_3, c_5 c_{11}	$u^{14} + u^{13} + \cdots + 4u - 1$
c_6, c_7, c_9 c_{10}	$u^{14} - 8u^{12} + \cdots - 3u - 1$
c_8	$u^{14} + 5u^{13} + \cdots - 44u + 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$16(16y^{14} - 172y^{13} + \cdots - 148y^2 + 4)$
c_2, c_3, c_5 c_{11}	$y^{14} + 13y^{13} + \cdots - 54y + 1$
c_6, c_7, c_9 c_{10}	$y^{14} - 16y^{13} + \cdots - 7y + 1$
c_8	$y^{14} - y^{13} + \cdots - 1584y + 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.120466+0.916470I$ $a=\ \ 0.368601-0.148138I$ $b=\ \ 0.258574+1.300320I$	$5.81499-5.60499I$	$9.56216+5.32481I$
$u=-0.120466-0.916470I$ $a=\ \ 0.368601+0.148138I$ $b=\ \ 0.258574-1.300320I$	$5.81499+5.60499I$	$9.56216-5.32481I$
$u=\ \ 1.016760+0.568716I$ $a=\ \ 0.96711+1.31824I$ $b=\ \ 0.41976-1.38103I$	$9.30919+10.50750I$	$10.66498-7.31370I$
$u=\ \ 1.016760-0.568716I$ $a=\ \ 0.96711-1.31824I$ $b=\ \ 0.41976+1.38103I$	$9.30919-10.50750I$	$10.66498+7.31370I$
$u=\ \ 0.737410$ $a=\ \ 0.467940$ $b=-1.22694$	-0.355949	22.0910
$u=-1.309190+0.052676I$ $a=\ \ 0.259567-1.228370I$ $b=-0.364310+0.747897I$	$3.65387+1.40001I$	$5.70050-4.92983I$
$u=-1.309190-0.052676I$ $a=\ \ 0.259567+1.228370I$ $b=-0.364310-0.747897I$	$3.65387-1.40001I$	$5.70050+4.92983I$
$u=-0.526573$ $a=\ \ 0.667838$ $b=\ \ 0.133734$	0.784313	13.0950
$u=\ \ 0.268307+0.257341I$ $a=-0.233314-1.367320I$ $b=-0.644907+0.288035I$	$-1.20190+0.85736I$	$-4.43900-4.77044I$
$u=\ \ 0.268307-0.257341I$ $a=-0.233314+1.367320I$ $b=-0.644907-0.288035I$	$-1.20190-0.85736I$	$-4.43900+4.77044I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.72014 + 0.16032I$ $a = 0.52732 - 1.89025I$ $b = 0.52839 + 1.47236I$	$18.7924 - 13.4596I$	$11.49654 + 6.20510I$
$u = -1.72014 - 0.16032I$ $a = 0.52732 + 1.89025I$ $b = 0.52839 - 1.47236I$	$18.7924 + 13.4596I$	$11.49654 - 6.20510I$
$u = 1.75930 + 0.20189I$ $a = -0.45717 - 1.59729I$ $b = -0.150905 + 1.395380I$	$17.7001 + 3.9528I$	$13.79713 - 2.45311I$
$u = 1.75930 - 0.20189I$ $a = -0.45717 + 1.59729I$ $b = -0.150905 - 1.395380I$	$17.7001 - 3.9528I$	$13.79713 + 2.45311I$

II. $\boldsymbol{I_2^u = \langle 6u^{11}a + 15u^{11} + \cdots - 8a + 49,\ -6u^{11}a + 24u^{11} + \cdots - 16a + 61,\ u^{12} + 2u^{11} + \cdots + 4u + 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} a \\ -0.260870au^{11} - 0.652174u^{11} + \cdots + 0.347826a - 2.13043 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.652174au^{11} + 7.86957u^{11} + \cdots - 2.13043a + 19.1739 \\ -0.304348au^{11} - 0.260870u^{11} + \cdots - 0.260870a + 1.34783 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2u^{11} - u^{10} + \cdots - 4u - 2 \\ 2u^{11} - 13u^9 + 27u^7 + u^6 - 19u^5 - 4u^4 + 3u^3 + 3u^2 + 4u + 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.347826au^{11} + 4.13043u^{11} + \cdots - 1.86957a + 12.8261 \\ -0.304348au^{11} + 3.73913u^{11} + \cdots - 0.260870a + 5.34783 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.521739au^{11} + 0.304348u^{11} + \cdots + 1.30435a + 0.260870 \\ -0.782609au^{11} - 0.956522u^{11} + \cdots + 0.0434783a - 2.39130 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.521739au^{11} + 0.304348u^{11} + \cdots + 1.30435a + 0.260870 \\ -0.782609au^{11} - 0.956522u^{11} + \cdots + 0.0434783a - 2.39130 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{10} - 28u^8 + 64u^6 + 4u^5 - 52u^4 - 16u^3 + 12u^2 + 12u + 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{24} - 7u^{23} + \cdots - 5492u + 2488$
c_2, c_3, c_5 c_{11}	$u^{24} - 4u^{23} + \cdots - 4u + 1$
c_6, c_7, c_9 c_{10}	$(u^{12} - 2u^{11} + \cdots - 4u + 1)^2$
c_8	$(u^{12} - 2u^{10} + u^9 + 4u^8 - u^7 - 3u^6 + 3u^5 + 3u^4 - u^3 - u^2 + 2u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{24} - 15y^{23} + \cdots - 39497040y + 6190144$
c_2, c_3, c_5 c_{11}	$y^{24} + 16y^{23} + \cdots + 20y + 1$
c_6, c_7, c_9 c_{10}	$(y^{12} - 16y^{11} + \cdots - 6y + 1)^2$
c_8	$(y^{12} - 4y^{11} + \cdots - 6y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.906692 + 0.344889I$ $a = 0.087956 + 0.330963I$ $b = 0.991263 - 0.128941I$	$4.52195 + 5.52285I$	$8.56374 - 6.48307I$
$u = 0.906692 + 0.344889I$ $a = -0.87713 - 1.53641I$ $b = -0.42275 + 1.37969I$	$4.52195 + 5.52285I$	$8.56374 - 6.48307I$
$u = 0.906692 - 0.344889I$ $a = 0.087956 - 0.330963I$ $b = 0.991263 + 0.128941I$	$4.52195 - 5.52285I$	$8.56374 + 6.48307I$
$u = 0.906692 - 0.344889I$ $a = -0.87713 + 1.53641I$ $b = -0.42275 - 1.37969I$	$4.52195 - 5.52285I$	$8.56374 + 6.48307I$
$u = -0.746978 + 0.302047I$ $a = -0.486446 - 1.164460I$ $b = -0.009071 - 0.303466I$	$3.49764 - 0.49850I$	$6.63137 + 1.38008I$
$u = -0.746978 + 0.302047I$ $a = 1.74786 - 1.42100I$ $b = 0.002396 + 1.116620I$	$3.49764 - 0.49850I$	$6.63137 + 1.38008I$
$u = -0.746978 - 0.302047I$ $a = -0.486446 + 1.164460I$ $b = -0.009071 + 0.303466I$	$3.49764 + 0.49850I$	$6.63137 - 1.38008I$
$u = -0.746978 - 0.302047I$ $a = 1.74786 + 1.42100I$ $b = 0.002396 - 1.116620I$	$3.49764 + 0.49850I$	$6.63137 - 1.38008I$
$u = -0.077590 + 0.553195I$ $a = 0.931659 + 0.876936I$ $b = 0.580478 + 0.088669I$	$1.52068 - 2.46907I$	$2.47747 + 3.95252I$
$u = -0.077590 + 0.553195I$ $a = -0.188696 - 0.434891I$ $b = -0.255684 - 1.161480I$	$1.52068 - 2.46907I$	$2.47747 + 3.95252I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.077590 - 0.553195I$ $a = 0.931659 - 0.876936I$ $b = 0.580478 - 0.088669I$	$1.52068 + 2.46907I$	$2.47747 - 3.95252I$
$u = -0.077590 - 0.553195I$ $a = -0.188696 + 0.434891I$ $b = -0.255684 + 1.161480I$	$1.52068 + 2.46907I$	$2.47747 - 3.95252I$
$u = -0.389319$ $a = 4.87987 + 3.31193I$ $b = 0.110618 + 1.018190I$	3.95056	11.0690
$u = -0.389319$ $a = 4.87987 - 3.31193I$ $b = 0.110618 - 1.018190I$	3.95056	11.0690
$u = 1.65757 + 0.05967I$ $a = -0.425611 + 0.080237I$ $b = -0.498557 + 0.415422I$	$11.96400 + 1.70959I$	$7.87181 - 0.16720I$
$u = 1.65757 + 0.05967I$ $a = 0.70856 + 2.24798I$ $b = 0.099763 - 1.246630I$	$11.96400 + 1.70959I$	$7.87181 - 0.16720I$
$u = 1.65757 - 0.05967I$ $a = -0.425611 - 0.080237I$ $b = -0.498557 - 0.415422I$	$11.96400 - 1.70959I$	$7.87181 + 0.16720I$
$u = 1.65757 - 0.05967I$ $a = 0.70856 - 2.24798I$ $b = 0.099763 + 1.246630I$	$11.96400 - 1.70959I$	$7.87181 + 0.16720I$
$u = -1.68947 + 0.08890I$ $a = -0.548076 - 0.328965I$ $b = 1.265990 + 0.145887I$	$13.6389 - 7.2036I$	$10.08749 + 4.71657I$
$u = -1.68947 + 0.08890I$ $a = -0.27673 + 2.03323I$ $b = -0.53950 - 1.55444I$	$13.6389 - 7.2036I$	$10.08749 + 4.71657I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.68947-0.08890I$ $a=-0.548076+0.328965I$ $b=\ \ 1.265990-0.145887I$	$13.6389+7.2036I$	$10.08749-4.71657I$
$u=-1.68947-0.08890I$ $a=-0.27673-2.03323I$ $b=-0.53950+1.55444I$	$13.6389+7.2036I$	$10.08749-4.71657I$
$u=-1.71112$ $a=-0.05322+1.80943I$ $b=\ \ 0.67504-1.53852I$	17.8795	13.6670
$u=-1.71112$ $a=-0.05322-1.80943I$ $b=\ \ 0.67504+1.53852I$	17.8795	13.6670

III.

$$\boldsymbol{I_3^u = \langle -u^3 - u^2 + b + 2u + 3,\ 3u^3 + 2u^2 + 4a - 7u - 7,\ u^4 + 2u^3 - u^2 - 5u - 4 \rangle}$$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -\frac{3}{4}u^3 - \frac{1}{2}u^2 + \frac{7}{4}u + \frac{7}{4} \\ u^3 + u^2 - 2u - 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2 + 1 \\ -2u^3 - u^2 + 5u + 4 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -\frac{1}{4}u^3 + \frac{1}{2}u^2 + \frac{1}{4}u + \frac{1}{4} \\ u^3 - 2u - 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{3}{2}u^3 - u^2 + \frac{5}{2}u + \frac{9}{2} \\ u^3 - u - 2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -\frac{1}{4}u^3 - \frac{1}{2}u^2 + \frac{1}{4}u + \frac{5}{4} \\ -u^3 - u^2 + 3u + 3 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{3}{4}u^3 - \frac{1}{2}u^2 + \frac{3}{4}u + \frac{7}{4} \\ u^3 + u^2 - u - 3 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{3}{4}u^3 - \frac{1}{2}u^2 + \frac{3}{4}u + \frac{7}{4} \\ u^3 + u^2 - u - 3 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 14$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y-1)^4$
c_2, c_3, c_5 c_{11}	$y^4 + y^3 - 5y^2 - 6y + 1$
c_6, c_7, c_9 c_{10}	$y^4 - 6y^3 + 13y^2 - 17y + 16$
c_8	$y^4 - 2y^3 + 25y^2 - 21y + 4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.964457 + 0.761911I$ $a = -0.699517 + 0.805292I$ $b = 0.061094 - 1.309640I$	8.22467	14.0000
$u = -0.964457 - 0.761911I$ $a = -0.699517 - 0.805292I$ $b = 0.061094 + 1.309640I$	8.22467	14.0000
$u = 1.59205$ $a = 0.242325$ $b = 0.385795$	8.22467	14.0000
$u = -1.66314$ $a = 0.906709$ $b = -1.50798$	8.22467	14.0000

IV. $\boldsymbol{I_4^u = \langle b + a - 1,\ a^2 - a + 2,\ u - 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} a \\ -a+1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1 \\ a+1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -1 \\ a \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} a-1 \\ -a+2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} a-1 \\ -a+2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 14$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u		$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	1.00000		
$a=$	$0.50000+1.32288I$	8.22467	14.0000
$b=$	$0.50000-1.32288I$		
$u=$	1.00000		
$a=$	$0.50000-1.32288I$	8.22467	14.0000
$b=$	$0.50000+1.32288I$		

V. $I_5^u = \langle b+1,\ 2a-1,\ u^2-u-1\rangle$

(i) Arc colorings

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

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

$$a_7 = \begin{pmatrix}1\\-u-1\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}0.5\\-1\end{pmatrix}$$

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

$$a_5 = \begin{pmatrix}1.5\\-1\end{pmatrix}$$

$$a_3 = \begin{pmatrix}2\\-2\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-\frac{1}{2}u+1\\ \frac{1}{2}u-\frac{1}{2}\end{pmatrix}$$

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

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{15}{4}u - \frac{9}{4}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$16(16y^2 - 12y + 1)$
c_2, c_3, c_5 c_{11}	$(y-1)^2$
c_6, c_7, c_9 c_{10}	$y^2 - 3y + 1$
c_8	y^2

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.618034$ $a = 0.500000$ $b = -1.00000$	-0.657974	-4.56760
$u = 1.61803$ $a = 0.500000$ $b = -1.00000$	7.23771	3.81760

VI. $I_6^u = \langle 2b + a - 1,\ a^2 - 2a + 5,\ u + 1\rangle$

(i) Arc colorings

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

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

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

$$a_{11} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} a \\ -\frac{1}{2}a + \frac{1}{2} \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} \frac{1}{2}a - \frac{3}{2} \\ 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} \frac{1}{2}a - \frac{1}{2} \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} \frac{1}{2}a - \frac{3}{2} \\ \frac{1}{2}a - \frac{1}{2} \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} \frac{1}{2}a - \frac{1}{2} \\ 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{1}{2}a - \frac{1}{2} \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_6^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = \quad 1.00000 + 2.00000I$ $b = \quad - 1.000000I$	4.93480	12.0000
$u = -1.00000$ $a = \quad 1.00000 - 2.00000I$ $b = \quad 1.000000I$	4.93480	12.0000

VII. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$16(u+1)^6(u^2+2u+2)(4u^2+2u-1)(4u^{14}-22u^{13}+\cdots-12u+2)$ $\cdot\,(u^{24}-7u^{23}+\cdots-5492u+2488)$
c_2, c_{11}	$(u-1)^2(u^2+1)(u^2-u+2)(u^4+u^3+u^2+2u-1)$ $\cdot\,(u^{14}+u^{13}+\cdots+4u-1)(u^{24}-4u^{23}+\cdots-4u+1)$
c_3, c_5	$(u+1)^2(u^2+1)(u^2-u+2)(u^4+u^3+u^2+2u-1)$ $\cdot\,(u^{14}+u^{13}+\cdots+4u-1)(u^{24}-4u^{23}+\cdots-4u+1)$
c_4	$16(u+1)^6(u^2-2u+2)(4u^2-2u-1)(4u^{14}-22u^{13}+\cdots-12u+2)$ $\cdot\,(u^{24}-7u^{23}+\cdots-5492u+2488)$
c_6, c_7	$(u+1)^4(u^2-u-1)(u^4-2u^3-u^2+5u-4)$ $\cdot\,((u^{12}-2u^{11}+\cdots-4u+1)^2)(u^{14}-8u^{12}+\cdots-3u-1)$
c_8	$u^2(u-1)^2(u^2+1)(u^4-2u^3+u^2+5u+2)$ $\cdot\,(u^{12}-2u^{10}+u^9+4u^8-u^7-3u^6+3u^5+3u^4-u^3-u^2+2u+1)^2$ $\cdot\,(u^{14}+5u^{13}+\cdots-44u+16)$
c_9, c_{10}	$(u-1)^2(u+1)^2(u^2+u-1)(u^4-2u^3-u^2+5u-4)$ $\cdot\,((u^{12}-2u^{11}+\cdots-4u+1)^2)(u^{14}-8u^{12}+\cdots-3u-1)$

VIII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$256(y-1)^6(y^2+4)(16y^2-12y+1)(16y^{14}-172y^{13}+\cdots-148y^2+4)$ $\cdot\,(y^{24}-15y^{23}+\cdots-39497040y+6190144)$
c_2, c_3, c_5 c_{11}	$(y-1)^2(y+1)^2(y^2+3y+4)(y^4+y^3-5y^2-6y+1)$ $\cdot\,(y^{14}+13y^{13}+\cdots-54y+1)(y^{24}+16y^{23}+\cdots+20y+1)$
c_6, c_7, c_9 c_{10}	$(y-1)^4(y^2-3y+1)(y^4-6y^3+13y^2-17y+16)$ $\cdot\,((y^{12}-16y^{11}+\cdots-6y+1)^2)(y^{14}-16y^{13}+\cdots-7y+1)$
c_8	$y^2(y-1)^2(y+1)^2(y^4-2y^3+25y^2-21y+4)$ $\cdot\,((y^{12}-4y^{11}+\cdots-6y+1)^2)(y^{14}-y^{13}+\cdots-1584y+256)$