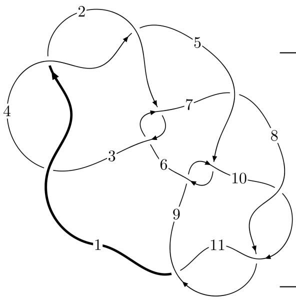
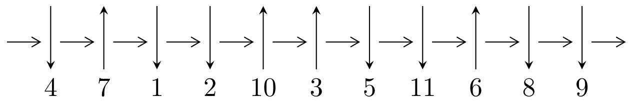
$11a_{250}$ $(K11a_{250})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I^u_1 &= \langle 15u^9 - 5u^8 + 43u^7 - 48u^6 + 65u^5 - 93u^4 + 16u^3 - 58u^2 + 11b - 11u - 34,\\
&\quad -8u^9 - u^8 - 31u^7 + 19u^6 - 42u^5 + 65u^4 - 10u^3 + 61u^2 + 11a + 22u + 24,\\
&\quad u^{10} + 3u^8 - 2u^7 + 4u^6 - 5u^5 - u^4 - 4u^3 - 3u^2 - 3u - 1\rangle\\
I^u_2 &= \langle -3.80757 \times 10^{52}u^{41} - 8.35941 \times 10^{52}u^{40} + \cdots + 3.13757 \times 10^{53}b - 1.31429 \times 10^{54},\\
&\quad 4.68086 \times 10^{52}u^{41} + 1.61851 \times 10^{53}u^{40} + \cdots + 6.27515 \times 10^{53}a + 2.05544 \times 10^{54},\\
&\quad u^{42} + 2u^{41} + \cdots + 160u - 32\rangle\\
I^u_3 &= \langle -u^4 + u^3 - 2u^2 + b - 1,\ u^4 - u^3 + 2u^2 + a - u + 1,\ u^5 - u^4 + 2u^3 - u^2 + u - 1\rangle
\end{aligned}$$

$$I^v_1 = \langle a,\ v^4 + 2v^3 + v^2 + b - 2v - 1,\ v^5 + 3v^4 + 4v^3 + v^2 - v - 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 62 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. $I_1^u =$
$\langle 15u^9-5u^8+\cdots+11b-34,\ -8u^9-u^8+\cdots+11a+24,\ u^{10}+3u^8+\cdots-3u-1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ u^3+u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{8}{11}u^9+\frac{1}{11}u^8+\cdots-2u-\frac{24}{11} \\ -\frac{15}{11}u^9+\frac{5}{11}u^8+\cdots+u+\frac{34}{11} \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -\frac{1}{11}u^9-\frac{7}{11}u^8+\cdots-u-\frac{8}{11} \\ -\frac{5}{11}u^9-\frac{2}{11}u^8+\cdots+2u+\frac{15}{11} \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{3}{11}u^9+\frac{10}{11}u^8+\cdots-3u-\frac{9}{11} \\ -\frac{1}{11}u^9+\frac{4}{11}u^8+\cdots-u-\frac{8}{11} \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -\frac{6}{11}u^9-\frac{9}{11}u^8+\cdots+u+\frac{7}{11} \\ -\frac{5}{11}u^9-\frac{2}{11}u^8+\cdots+2u+\frac{15}{11} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{6}{11}u^9-\frac{9}{11}u^8+\cdots+u+\frac{7}{11} \\ \frac{2}{11}u^9-\frac{8}{11}u^8+\cdots+u-\frac{6}{11} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{8}{11}u^9+\frac{1}{11}u^8+\cdots-2u-\frac{24}{11} \\ -\frac{15}{11}u^9+\frac{5}{11}u^8+\cdots+u+\frac{34}{11} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} \frac{4}{11}u^9-\frac{16}{11}u^8+\cdots+2u-\frac{12}{11} \\ -\frac{8}{11}u^9-\frac{1}{11}u^8+\cdots+3u+\frac{35}{11} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} \frac{4}{11}u^9-\frac{16}{11}u^8+\cdots+2u-\frac{12}{11} \\ -\frac{8}{11}u^9-\frac{1}{11}u^8+\cdots+3u+\frac{35}{11} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -\frac{148}{11}u^9+\frac{20}{11}u^8-\frac{436}{11}u^7+\frac{368}{11}u^6-\frac{612}{11}u^5+\frac{856}{11}u^4+\frac{24}{11}u^3+\frac{584}{11}u^2+20u+\frac{290}{11}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_4 c_8, c_{10}, c_{11}	$u^{10} - 2u^9 - 3u^8 + 6u^7 + 4u^6 - 3u^5 - 7u^4 - 2u^3 + 5u^2 + u + 1$
c_2, c_5, c_6 c_9	$u^{10} + 3u^8 + 2u^7 + 4u^6 + 5u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1$
c_7	$u^{10} - 5u^9 + 9u^8 - 14u^7 + 43u^6 - 86u^5 + 82u^4 - 44u^3 + 25u^2 - 8u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_8, c_{10}, c_{11}	$y^{10} - 10y^9 + \cdots + 9y + 1$
c_2, c_5, c_6 c_9	$y^{10} + 6y^9 + \cdots - 3y + 1$
c_7	$y^{10} - 7y^9 + \cdots - 264y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.374996 + 0.969123I$ $a = 0.826766 - 0.465071I$ $b = 0.495440 - 0.507246I$	$-8.15821 + 5.73058I$	$-13.3587 - 7.2455I$
$u = 0.374996 - 0.969123I$ $a = 0.826766 + 0.465071I$ $b = 0.495440 + 0.507246I$	$-8.15821 - 5.73058I$	$-13.3587 + 7.2455I$
$u = 0.303403 + 1.209990I$ $a = -1.85109 - 0.20327I$ $b = 0.162109 + 1.283500I$	$-3.86974 + 5.20060I$	$-7.96519 - 6.38440I$
$u = 0.303403 - 1.209990I$ $a = -1.85109 + 0.20327I$ $b = 0.162109 - 1.283500I$	$-3.86974 - 5.20060I$	$-7.96519 + 6.38440I$
$u = 1.26706$ $a = -0.176572$ $b = 1.46005$	-8.35920	-10.3000
$u = -0.414534 + 0.541688I$ $a = 0.458424 + 0.234315I$ $b = 0.492085 + 0.000051I$	$0.503273 - 1.263700I$	$1.66471 + 5.41761I$
$u = -0.414534 - 0.541688I$ $a = 0.458424 - 0.234315I$ $b = 0.492085 - 0.000051I$	$0.503273 + 1.263700I$	$1.66471 - 5.41761I$
$u = -0.70104 + 1.44191I$ $a = -1.59910 + 0.43476I$ $b = -0.81865 - 2.97735I$	$-17.0313 - 13.8030I$	$-11.75052 + 6.72032I$
$u = -0.70104 - 1.44191I$ $a = -1.59910 - 0.43476I$ $b = -0.81865 + 2.97735I$	$-17.0313 + 13.8030I$	$-11.75052 - 6.72032I$
$u = -0.392717$ $a = -2.49343$ $b = 3.87798$	-3.61603	29.1200

II. $\boldsymbol{I^u_2 = \langle -3.81 \times 10^{52} u^{41} - 8.36 \times 10^{52} u^{40} + \cdots + 3.14 \times 10^{53} b - 1.31 \times 10^{54},\ 4.68 \times 10^{52} u^{41} + 1.62 \times 10^{53} u^{40} + \cdots + 6.28 \times 10^{53} a + 2.06 \times 10^{54},\ u^{42} + 2u^{41} + \cdots + 160u - 32 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.0745936u^{41} - 0.257923u^{40} + \cdots + 10.8293u - 3.27552 \\ 0.121354u^{41} + 0.266429u^{40} + \cdots - 19.1733u + 4.18888 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.0112067u^{41} - 0.0509172u^{40} + \cdots - 4.57717u + 1.68714 \\ 0.00951074u^{41} - 0.0118752u^{40} + \cdots - 2.00158u + 0.586771 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.0211940u^{41} - 0.0128576u^{40} + \cdots + 0.540899u + 0.0730818 \\ -0.0173614u^{41} - 0.0459107u^{40} + \cdots + 3.62331u - 0.532689 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.00169594u^{41} - 0.0627924u^{40} + \cdots - 6.57875u + 2.27391 \\ 0.00951074u^{41} - 0.0118752u^{40} + \cdots - 2.00158u + 0.586771 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.00169594u^{41} - 0.0627924u^{40} + \cdots - 6.57875u + 2.27391 \\ 0.0149506u^{41} - 0.0121379u^{40} + \cdots - 7.44824u + 1.31405 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.0427439u^{41} - 0.190593u^{40} + \cdots + 5.62950u - 1.94845 \\ 0.104819u^{41} + 0.228367u^{40} + \cdots - 14.4116u + 2.74560 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.0436568u^{41} - 0.175667u^{40} + \cdots - 0.119113u + 0.363250 \\ 0.0599628u^{41} + 0.102136u^{40} + \cdots - 11.3816u + 1.97870 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.0436568u^{41} - 0.175667u^{40} + \cdots - 0.119113u + 0.363250 \\ 0.0599628u^{41} + 0.102136u^{40} + \cdots - 11.3816u + 1.97870 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.134327u^{41} - 0.260180u^{40} + \cdots + 20.1282u - 10.6371$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_4 c_8, c_{10}, c_{11}	$u^{42} - 5u^{41} + \cdots + 4u - 1$
c_2, c_5, c_6 c_9	$u^{42} - 2u^{41} + \cdots - 160u - 32$
c_7	$(u^{21} + u^{20} + \cdots + 15u - 7)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_8, c_{10}, c_{11}	$y^{42} - 43y^{41} + \cdots - 36y + 1$
c_2, c_5, c_6 c_9	$y^{42} + 30y^{41} + \cdots + 512y + 1024$
c_7	$(y^{21} - 15y^{20} + \cdots - 377y - 49)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.301475 + 0.932312I$ $a = 0.142420 - 0.134100I$ $b = 0.006905 - 0.449760I$	$-0.61084 - 1.86636I$	$-1.02291 + 4.31006I$
$u = -0.301475 - 0.932312I$ $a = 0.142420 + 0.134100I$ $b = 0.006905 + 0.449760I$	$-0.61084 + 1.86636I$	$-1.02291 - 4.31006I$
$u = -0.718495 + 0.746583I$ $a = -0.362067 + 0.111337I$ $b = -0.659494 + 0.166997I$	$-4.18012 - 2.65523I$	$-7.15894 + 3.42593I$
$u = -0.718495 - 0.746583I$ $a = -0.362067 - 0.111337I$ $b = -0.659494 - 0.166997I$	$-4.18012 + 2.65523I$	$-7.15894 - 3.42593I$
$u = 0.908340$ $a = 0.133290$ $b = -0.776221$	-2.69284	-1.88820
$u = 0.757860 + 0.809559I$ $a = -0.258757 + 0.022774I$ $b = 1.06122 + 1.11890I$	$-7.75684 - 1.37799I$	$-11.45551 + 0.55128I$
$u = 0.757860 - 0.809559I$ $a = -0.258757 - 0.022774I$ $b = 1.06122 - 1.11890I$	$-7.75684 + 1.37799I$	$-11.45551 - 0.55128I$
$u = 0.143080 + 1.138160I$ $a = -0.198727 + 1.091130I$ $b = -0.423136 + 0.904996I$	$-4.18012 + 2.65523I$	$-7.15894 - 3.42593I$
$u = 0.143080 - 1.138160I$ $a = -0.198727 - 1.091130I$ $b = -0.423136 - 0.904996I$	$-4.18012 - 2.65523I$	$-7.15894 + 3.42593I$
$u = 0.124893 + 1.179730I$ $a = 1.79724 - 0.20938I$ $b = -0.363469 - 0.817762I$	-4.26486	$-9.59286 + 0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.124893 - 1.179730I$ $a = 1.79724 + 0.20938I$ $b = -0.363469 + 0.817762I$	-4.26486	$-9.59286 + 0.I$
$u = -0.217762 + 1.215900I$ $a = -0.204545 + 0.152670I$ $b = -0.067025 + 0.964677I$	$-6.20610 - 2.63643I$	$-9.50660 + 3.19431I$
$u = -0.217762 - 1.215900I$ $a = -0.204545 - 0.152670I$ $b = -0.067025 - 0.964677I$	$-6.20610 + 2.63643I$	$-9.50660 - 3.19431I$
$u = -1.246850 + 0.095334I$ $a = -0.20702 + 1.83731I$ $b = 0.18969 - 3.74340I$	$-6.20610 + 2.63643I$	$-9.50660 - 3.19431I$
$u = -1.246850 - 0.095334I$ $a = -0.20702 - 1.83731I$ $b = 0.18969 + 3.74340I$	$-6.20610 - 2.63643I$	$-9.50660 + 3.19431I$
$u = -0.062851 + 1.267190I$ $a = -0.44654 - 1.42775I$ $b = 0.56639 - 1.55859I$	$-7.75684 - 1.37799I$	$-11.45551 + 0.55128I$
$u = -0.062851 - 1.267190I$ $a = -0.44654 + 1.42775I$ $b = 0.56639 + 1.55859I$	$-7.75684 + 1.37799I$	$-11.45551 - 0.55128I$
$u = 0.689788 + 0.085244I$ $a = 0.10873 - 2.08386I$ $b = 0.036159 + 1.125850I$	$-6.62038 - 4.96325I$	$-4.39047 + 4.44885I$
$u = 0.689788 - 0.085244I$ $a = 0.10873 + 2.08386I$ $b = 0.036159 - 1.125850I$	$-6.62038 + 4.96325I$	$-4.39047 - 4.44885I$
$u = -0.032710 + 1.316850I$ $a = -1.48074 + 0.27407I$ $b = 0.018660 + 0.415709I$	$-11.38730 - 3.50676I$	$-11.48794 + 0.92420I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.032710-1.316850I$ $a=-1.48074-0.27407I$ $b=\ \ 0.018660-0.415709I$	$-11.38730+3.50676I$	$-11.48794-0.92420I$
$u=\ \ 0.406565+1.308170I$ $a=\ \ 1.60327+0.37435I$ $b=\ \ 0.143307-1.393340I$	$-10.51330+9.23526I$	$-9.80018-6.18592I$
$u=\ \ 0.406565-1.308170I$ $a=\ \ 1.60327-0.37435I$ $b=\ \ 0.143307+1.393340I$	$-10.51330-9.23526I$	$-9.80018+6.18592I$
$u=\ \ 0.467929+1.287910I$ $a=-0.218735-0.332109I$ $b=-0.383046-0.376778I$	$-6.62038+4.96325I$	$-3.00000-4.44885I$
$u=\ \ 0.467929-1.287910I$ $a=-0.218735+0.332109I$ $b=-0.383046+0.376778I$	$-6.62038-4.96325I$	$-3.00000+4.44885I$
$u=-1.366190+0.229409I$ $a=\ \ 0.34075-1.54880I$ $b=-0.20630+3.45897I$	$-13.1353+6.4924I$	$-11.37675-3.43184I$
$u=-1.366190-0.229409I$ $a=\ \ 0.34075+1.54880I$ $b=-0.20630-3.45897I$	$-13.1353-6.4924I$	$-11.37675+3.43184I$
$u=\ \ 0.138201+0.576503I$ $a=\ \ 0.45895-1.80328I$ $b=-1.144560+0.354358I$	$-2.01761+0.71796I$	$-7.31049+2.90991I$
$u=\ \ 0.138201-0.576503I$ $a=\ \ 0.45895+1.80328I$ $b=-1.144560-0.354358I$	$-2.01761-0.71796I$	$-7.31049-2.90991I$
$u=\ \ 0.392577+0.424549I$ $a=\ \ 0.431238+0.140015I$ $b=-0.94305-1.13247I$	$-2.01761-0.71796I$	$-7.31049-2.90991I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.392577 - 0.424549I$ $a = 0.431238 - 0.140015I$ $b = -0.94305 + 1.13247I$	$-2.01761 + 0.71796I$	$-7.31049 + 2.90991I$
$u = 0.532799 + 0.134282I$ $a = 0.06196 + 2.20487I$ $b = 0.119696 - 1.020460I$	$-0.61084 - 1.86636I$	$-1.02291 + 4.31006I$
$u = 0.532799 - 0.134282I$ $a = 0.06196 - 2.20487I$ $b = 0.119696 + 1.020460I$	$-0.61084 + 1.86636I$	$-1.02291 - 4.31006I$
$u = -0.484104$ $a = -1.21008$ $b = -0.382654$	-2.69284	-1.88820
$u = -0.48774 + 1.47380I$ $a = -1.79650 - 0.31481I$ $b = -0.41376 - 3.12338I$	$-11.38730 - 3.50676I$	0
$u = -0.48774 - 1.47380I$ $a = -1.79650 + 0.31481I$ $b = -0.41376 + 3.12338I$	$-11.38730 + 3.50676I$	0
$u = -0.60041 + 1.43488I$ $a = 1.85685 - 0.18315I$ $b = 0.73561 + 3.15502I$	$-10.51330 - 9.23526I$	0
$u = -0.60041 - 1.43488I$ $a = 1.85685 + 0.18315I$ $b = 0.73561 - 3.15502I$	$-10.51330 + 9.23526I$	0
$u = 0.55352 + 1.47008I$ $a = 0.389275 + 0.429297I$ $b = 0.861596 + 0.598814I$	$-13.1353 + 6.4924I$	0
$u = 0.55352 - 1.47008I$ $a = 0.389275 - 0.429297I$ $b = 0.861596 - 0.598814I$	$-13.1353 - 6.4924I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.38484 + 1.62533I$ $a = 1.271330 + 0.448418I$ $b = 0.44405 + 2.70859I$	-19.5206	0
$u = -0.38484 - 1.62533I$ $a = 1.271330 - 0.448418I$ $b = 0.44405 - 2.70859I$	-19.5206	0

III.

$\boldsymbol{I_3^u = \langle -u^4+u^3-2u^2+b-1,\ u^4-u^3+2u^2+a-u+1,\ u^5-u^4+2u^3-u^2+u-1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

$$a_{10} = \begin{pmatrix} -u^4+u^3-2u^2+u-1 \\ u^4-u^3+2u^2+1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u^3+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^3 \\ u^4-u^3+u^2+1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^3 \\ u^3+u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ -u^4+u^3-u^2-1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4+u^3-2u^2+u-1 \\ u^4-u^3+2u^2+1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^4+2u^3-2u^2+u-1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^4+2u^3-2u^2+u-1 \\ u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^4+5u^3-7u^2+5u-12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.339110 + 0.822375I$ $a = 0.428550 + 1.039280I$ $b = -0.767660 - 0.216900I$	$-1.97403 - 1.53058I$	$-6.52924 + 5.40154I$
$u = -0.339110 - 0.822375I$ $a = 0.428550 - 1.039280I$ $b = -0.767660 + 0.216900I$	$-1.97403 + 1.53058I$	$-6.52924 - 5.40154I$
$u = 0.766826$ $a = -1.30408$ $b = 2.07090$	-4.04602	-10.7190
$u = 0.455697 + 1.200150I$ $a = -0.276511 + 0.728237I$ $b = 0.732208 + 0.471915I$	$-7.51750 + 4.40083I$	$-11.11126 - 1.16747I$
$u = 0.455697 - 1.200150I$ $a = -0.276511 - 0.728237I$ $b = 0.732208 - 0.471915I$	$-7.51750 - 4.40083I$	$-11.11126 + 1.16747I$

IV. $\boldsymbol{I_1^v = \langle a,\ v^4 + 2v^3 + v^2 + b - 2v - 1,\ v^5 + 3v^4 + 4v^3 + v^2 - v - 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

$$a_{10} = \begin{pmatrix} 0 \\ -v^4 - 2v^3 - v^2 + 2v + 1 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} v^2 + v \\ v \end{pmatrix}$$

$$a_4 = \begin{pmatrix} v + 1 \\ 1 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} v^3 + v^2 - 1 \\ -v^4 - 2v^3 - v^2 + 2v + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -v^3 - v^2 - v \\ v \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -v^3 - v^2 - v \\ v \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 5v^4 + 10v^3 + 8v^2 - 7v - 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -0.561306 + 0.557752I$ $a = 0$ $b = -0.428550 + 1.039280I$	$-1.97403 + 1.53058I$	$-6.52924 - 5.40154I$
$v = -0.561306 - 0.557752I$ $a = 0$ $b = -0.428550 - 1.039280I$	$-1.97403 - 1.53058I$	$-6.52924 + 5.40154I$
$v = 0.588022$ $a = 0$ $b = 1.30408$	-4.04602	-10.7190
$v = -1.23271 + 1.09381I$ $a = 0$ $b = 0.276511 - 0.728237I$	$-7.51750 + 4.40083I$	$-11.11126 - 1.16747I$
$v = -1.23271 - 1.09381I$ $a = 0$ $b = 0.276511 + 0.728237I$	$-7.51750 - 4.40083I$	$-11.11126 + 1.16747I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_8	$(u-1)^5(u^5+u^4-2u^3-u^2+u-1)$ $\cdot\,(u^{10}-2u^9-3u^8+6u^7+4u^6-3u^5-7u^4-2u^3+5u^2+u+1)$ $\cdot\,(u^{42}-5u^{41}+\cdots+4u-1)$
c_2, c_5	$u^5(u^5-u^4+2u^3-u^2+u-1)$ $\cdot\,(u^{10}+3u^8+2u^7+4u^6+5u^5-u^4+4u^3-3u^2+3u-1)$ $\cdot\,(u^{42}-2u^{41}+\cdots-160u-32)$
c_3, c_4, c_{10} c_{11}	$(u+1)^5(u^5-u^4-2u^3+u^2+u+1)$ $\cdot\,(u^{10}-2u^9-3u^8+6u^7+4u^6-3u^5-7u^4-2u^3+5u^2+u+1)$ $\cdot\,(u^{42}-5u^{41}+\cdots+4u-1)$
c_6, c_9	$u^5(u^5+u^4+2u^3+u^2+u+1)$ $\cdot\,(u^{10}+3u^8+2u^7+4u^6+5u^5-u^4+4u^3-3u^2+3u-1)$ $\cdot\,(u^{42}-2u^{41}+\cdots-160u-32)$
c_7	$(u^5+3u^4+4u^3+u^2-u-1)^2$ $\cdot\,(u^{10}-5u^9+9u^8-14u^7+43u^6-86u^5+82u^4-44u^3+25u^2-8u-4)$ $\cdot\,(u^{21}+u^{20}+\cdots+15u-7)^2$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_8, c_{10}, c_{11}	$((y-1)^5)(y^5 - 5y^4 + \cdots - y - 1)(y^{10} - 10y^9 + \cdots + 9y + 1)$ $\cdot (y^{42} - 43y^{41} + \cdots - 36y + 1)$
c_2, c_5, c_6 c_9	$y^5(y^5 + 3y^4 + \cdots - y - 1)(y^{10} + 6y^9 + \cdots - 3y + 1)$ $\cdot (y^{42} + 30y^{41} + \cdots + 512y + 1024)$
c_7	$((y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^2)(y^{10} - 7y^9 + \cdots - 264y + 16)$ $\cdot (y^{21} - 15y^{20} + \cdots - 377y - 49)^2$