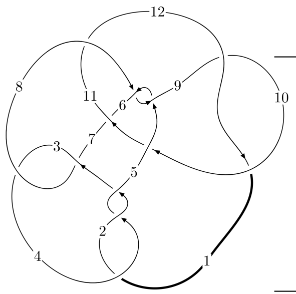
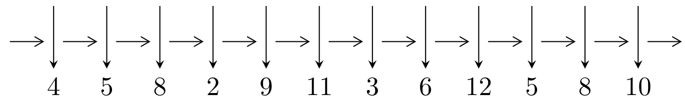
$12n_{0692}$ $(K12n_{0692})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 95253872184u^{16} + 167486372440u^{15} + \cdots + 1764711855595b + 60442442928, \\ & -241873986280u^{16} - 181431543352u^{15} + \cdots + 176471185595a + 1319914649856, \\ & u^{17} + u^{16} + \cdots - u - 1\rangle \\ I_2^u = \langle & u^6 - u^4 + u^2 + b + u,\ u^7 - u^6 - u^5 + 3u^4 + u^3 - 3u^2 + a + 3,\ u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1\rangle \\ I_3^u = \langle & 4.46740 \times 10^{15}u^{15} + 6.27459 \times 10^{15}u^{14} + \cdots + 2.01298 \times 10^{18}b - 8.81526 \times 10^{16}, \\ & 2.12213 \times 10^{16}u^{15} + 2.28177 \times 10^{16}u^{14} + \cdots + 4.02597 \times 10^{18}a - 9.94872 \times 10^{18}, \\ & u^{16} + u^{15} + \cdots - 640u + 256\rangle \end{aligned}$$

$$\begin{aligned} I_1^v = \langle & a,\ 941v^7 + 2551v^6 + 1791v^5 - 6184v^4 - 16309v^3 + 15249v^2 + 887b + 4192v - 1842, \\ & v^8 + 2v^7 - 8v^5 - 13v^4 + 28v^3 - 7v^2 - 3v + 1\rangle \end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 49 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.

$\boldsymbol{I_1^u = \langle 9.53\times10^{10}u^{16}+1.67\times10^{11}u^{15}+\cdots+1.76\times10^{11}b+6.04\times10^{10},\ -2.42\times10^{11}u^{16}-1.81\times10^{11}u^{15}+\cdots+1.76\times10^{11}a+1.32\times10^{12},\ u^{17}+u^{16}+\cdots-u-1\rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_3 = \begin{pmatrix}1.37061u^{16}+1.02811u^{15}+\cdots+7.62117u-7.47949\\-0.539770u^{16}-0.949086u^{15}+\cdots+0.0281086u-0.342506\end{pmatrix}$$

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

$$a_8 = \begin{pmatrix}0.342506u^{16}+0.882276u^{15}+\cdots+6.10888u-0.370615\\0.409316u^{16}+0.397625u^{15}+\cdots+0.882276u+0.539770\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-0.0668101u^{16}+0.484651u^{15}+\cdots+5.22660u-0.910385\\0.409316u^{16}+0.397625u^{15}+\cdots+0.882276u+0.539770\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}1.08601u^{16}+0.931667u^{15}+\cdots-6.04983u-0.704908\\-0.202045u^{16}-0.0982208u^{15}+\cdots+0.982581u-0.563663\end{pmatrix}$$

$$a_5 = \begin{pmatrix}-0.380139u^{16}-0.473041u^{15}+\cdots+0.662163u+1.73660\\-0.183525u^{16}-0.292667u^{15}+\cdots-1.16333u-0.190353\end{pmatrix}$$

$$a_2 = \begin{pmatrix}2.20774u^{16}+2.09139u^{15}+\cdots+8.45012u-9.06872\\-0.720687u^{16}-0.896329u^{15}+\cdots+0.887039u-0.0425575\end{pmatrix}$$

$$a_4 = \begin{pmatrix}1.91038u^{16}+1.97719u^{15}+\cdots+7.59306u-7.13699\\-0.551461u^{16}-0.673429u^{15}+\cdots+0.977195u+0.0668101\end{pmatrix}$$

$$a_1 = \begin{pmatrix}0.301587u^{16}+0.217988u^{15}+\cdots+3.13092u-1.78891\\-0.287349u^{16}-0.365150u^{15}+\cdots-0.397625u+0.0116913\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}1.19077u^{16}+1.37427u^{15}+\cdots-1.38476u-1.92738\\-0.0505037u^{16}+0.0449819u^{15}+\cdots+1.51534u-0.116444\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= \frac{2048919230872}{176471185595}u^{16} + \frac{1391303845096}{176471185595}u^{15} + \cdots + \frac{3163149744064}{176471185595}u - \frac{6932356318654}{176471185595}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_4 c_9, c_{12}	$u^{17} - 7u^{16} + \cdots - 5u - 1$
c_3, c_6, c_7	$u^{17} - u^{16} + \cdots - u + 1$
c_5, c_8	$u^{17} - u^{16} + \cdots + 3u - 1$
c_{10}	$u^{17} + u^{16} + \cdots - 699u + 199$
c_{11}	$u^{17} + 3u^{16} + \cdots - 263u - 83$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_9, c_{12}	$y^{17} - 13y^{16} + \cdots + 21y - 1$
c_3, c_6, c_7	$y^{17} + 15y^{16} + \cdots + 13y - 1$
c_5, c_8	$y^{17} + 11y^{16} + \cdots + 25y - 1$
c_{10}	$y^{17} + 27y^{16} + \cdots + 947097y - 39601$
c_{11}	$y^{17} + 7y^{16} + \cdots + 91413y - 6889$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.764077 + 0.442209I$ $a = -0.0395160 - 0.1081060I$ $b = -0.706366 - 0.510886I$	$-4.55533 - 6.93072I$	$-21.1582 + 11.9778I$
$u = 0.764077 - 0.442209I$ $a = -0.0395160 + 0.1081060I$ $b = -0.706366 + 0.510886I$	$-4.55533 + 6.93072I$	$-21.1582 - 11.9778I$
$u = -0.791671$ $a = 0.0812804$ $b = 0.842612$	-8.70952	-30.7710
$u = 0.753921 + 0.115715I$ $a = 2.02750 - 2.62203I$ $b = 0.82885 - 1.21720I$	$-0.77832 + 2.01331I$	$-15.1488 - 1.3786I$
$u = 0.753921 - 0.115715I$ $a = 2.02750 + 2.62203I$ $b = 0.82885 + 1.21720I$	$-0.77832 - 2.01331I$	$-15.1488 + 1.3786I$
$u = -0.502094 + 0.490826I$ $a = -0.001938 + 0.710947I$ $b = 0.852485 - 0.481916I$	$2.49540 + 2.02523I$	$-6.20824 - 3.33819I$
$u = -0.502094 - 0.490826I$ $a = -0.001938 - 0.710947I$ $b = 0.852485 + 0.481916I$	$2.49540 - 2.02523I$	$-6.20824 + 3.33819I$
$u = -0.291694 + 0.477697I$ $a = -2.80059 - 7.96264I$ $b = -1.52657 + 1.44231I$	$-2.45442 - 0.76114I$	$-1.7282 - 15.9915I$
$u = -0.291694 - 0.477697I$ $a = -2.80059 + 7.96264I$ $b = -1.52657 - 1.44231I$	$-2.45442 + 0.76114I$	$-1.7282 + 15.9915I$
$u = 0.439135$ $a = 0.660014$ $b = -0.311858$	-0.644803	-15.2830

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.432752$ $a=-7.32022$ $b=-0.938137$	-2.91990	-47.5300
$u=-0.78485+1.87131I$ $a=-0.389251-0.738414I$ $b=-0.26086+1.40299I$	$11.20130+3.50827I$	$-11.32341-1.79574I$
$u=-0.78485-1.87131I$ $a=-0.389251+0.738414I$ $b=-0.26086-1.40299I$	$11.20130-3.50827I$	$-11.32341+1.79574I$
$u=\quad 0.93651+1.91501I$ $a=\quad 0.311529-0.816594I$ $b=\quad 1.12325+1.48088I$	$6.80306-8.74093I$	$-14.7558+4.0661I$
$u=\quad 0.93651-1.91501I$ $a=\quad 0.311529+0.816594I$ $b=\quad 1.12325-1.48088I$	$6.80306+8.74093I$	$-14.7558-4.0661I$
$u=-0.98322+2.02620I$ $a=-0.318282-0.900844I$ $b=-1.60710+2.06949I$	$10.6972+14.1953I$	$-12.00000-6.60789I$
$u=-0.98322-2.02620I$ $a=-0.318282+0.900844I$ $b=-1.60710-2.06949I$	$10.6972-14.1953I$	$-12.00000+6.60789I$

II. $I^u_2 = \langle u^6 - u^4 + u^2 + b + u,\ u^7 - u^6 - u^5 + 3u^4 + u^3 - 3u^2 + a + 3,\ u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^7 + u^6 + u^5 - 3u^4 - u^3 + 3u^2 - 3 \\ -u^6 + u^4 - u^2 - u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^4 - u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^7 + u^6 + u^5 - 4u^4 - u^3 + 4u^2 - 4 \\ -u^6 + 2u^4 - u^2 - u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^7 + u^6 + u^5 - 3u^4 - u^3 + 3u^2 - 3 \\ -u^6 + u^4 - u^2 - u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^4 + u^2 - 1 \\ u^4 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^6 + u^4 - 2u^2 + 1 \\ -u^7 + u^6 + 2u^5 - u^4 - 2u^3 + 2u^2 + 2u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^7 - 4u^6 - 2u^5 + 5u^4 + 3u^3 - 5u^2 - 5u - 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^8$
c_3, c_7	y^8
c_5, c_8	$y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1$
c_6, c_{11}	$y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1$
c_9, c_{10}, c_{12}	$y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.570868 + 0.730671I$ $a = -1.21928 + 2.03110I$ $b = -1.44082 - 1.43962I$	$-2.68559 + 1.13123I$	$-18.1377 - 5.3065I$
$u = 0.570868 - 0.730671I$ $a = -1.21928 - 2.03110I$ $b = -1.44082 + 1.43962I$	$-2.68559 - 1.13123I$	$-18.1377 + 5.3065I$
$u = -0.855237 + 0.665892I$ $a = 1.230330 + 0.083902I$ $b = 0.44992 - 1.37717I$	$0.51448 + 2.57849I$	$-10.11893 - 3.45077I$
$u = -0.855237 - 0.665892I$ $a = 1.230330 - 0.083902I$ $b = 0.44992 + 1.37717I$	$0.51448 - 2.57849I$	$-10.11893 + 3.45077I$
$u = -1.09818$ $a = -0.337834$ $b = -0.407427$	-8.14766	-12.9880
$u = 1.031810 + 0.655470I$ $a = 0.370895 + 0.073482I$ $b = 0.136119 + 0.548347I$	$-4.02461 - 6.44354I$	$-10.82984 + 2.68172I$
$u = 1.031810 - 0.655470I$ $a = 0.370895 - 0.073482I$ $b = 0.136119 - 0.548347I$	$-4.02461 + 6.44354I$	$-10.82984 - 2.68172I$
$u = 0.603304$ $a = -2.42604$ $b = -0.883019$	-2.48997	-13.8390

III. $\boldsymbol{I^u_3 =}$
$\boldsymbol{\langle 4.47\times10^{15}u^{15}+6.27\times10^{15}u^{14}+\cdots+2.01\times10^{18}b-8.82\times10^{16},\ 2.12\times10^{16}u^{15}+2.28\times10^{16}u^{14}+\cdots+4.03\times10^{18}a-9.95\times10^{18},\ u^{16}+u^{15}+\cdots-640u+256\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.00527110u^{15} - 0.00566765u^{14} + \cdots - 9.23744u + 2.47114 \\ -0.00221929u^{15} - 0.00311706u^{14} + \cdots - 1.87927u + 0.0437920 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.00131807u^{15} - 0.000965283u^{14} + \cdots + 5.02090u - 2.85900 \\ 0.00125266u^{15} + 0.00142411u^{14} + \cdots + 2.92217u - 0.895088 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.0000654109u^{15} - 0.00238940u^{14} + \cdots + 2.09873u - 1.96392 \\ 0.00125266u^{15} + 0.00142411u^{14} + \cdots + 2.92217u - 0.895088 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.000844467u^{15} - 0.00179388u^{14} + \cdots + 1.76050u - 2.43832 \\ 0.000597578u^{15} + 0.000131722u^{14} + \cdots + 3.26843u - 1.14785 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.00355246u^{15} + 0.00420683u^{14} + \cdots + 4.56085u + 0.0559940 \\ 0.000931308u^{15} + 0.000874523u^{14} + \cdots + 1.47705u + 0.342822 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.00941161u^{15} - 0.0110390u^{14} + \cdots - 13.9929u + 1.68523 \\ -0.00326781u^{15} - 0.00500207u^{14} + \cdots - 3.20051u - 0.587143 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.00749346u^{15} - 0.00988307u^{14} + \cdots - 11.5790u + 0.607025 \\ -0.00129900u^{15} - 0.00377384u^{14} + \cdots - 0.399220u - 1.24590 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.00155963u^{15} + 0.00229520u^{14} + \cdots - 2.60619u + 2.70441 \\ -0.00272297u^{15} - 0.00333262u^{14} + \cdots - 4.50999u + 1.52352 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.0000400338u^{15} - 0.00236158u^{14} + \cdots + 0.837916u - 1.48462 \\ 0.000345643u^{15} - 0.00112847u^{14} + \cdots + 1.97094u - 0.673787 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $=$
$$-\frac{4129940980039711}{1006491371550221696}u^{15}-\frac{3800282985571637}{1006491371550221696}u^{14}+\cdots-\frac{453043593399533900}{7863213840236107}u-\frac{735413524873663340}{7863213840236107}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_4 c_9, c_{12}	$u^{16} - 3u^{15} + \cdots - 8u + 1$
c_3, c_6, c_7	$u^{16} - u^{15} + \cdots + 640u + 256$
c_5, c_8	$(u^8 - u^7 + 3u^6 - 2u^5 + 3u^4 - 2u^3 - 1)^2$
c_{10}	$u^{16} + 3u^{15} + \cdots + 2169u + 361$
c_{11}	$u^{16} - 4u^{15} + \cdots - 189u + 297$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_9, c_{12}	$y^{16} + 9y^{15} + \cdots + 4y + 1$
c_3, c_6, c_7	$y^{16} + 33y^{15} + \cdots + 606208y + 65536$
c_5, c_8	$(y^8 + 5y^7 + 11y^6 + 10y^5 - y^4 - 10y^3 - 6y^2 + 1)^2$
c_{10}	$y^{16} + 31y^{15} + \cdots - 741503y + 130321$
c_{11}	$y^{16} + 32y^{15} + \cdots + 78327y + 88209$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.928106 + 0.575657I$ $a = 0.314063 - 0.194797I$ $b = -0.553504 + 0.808003I$	-0.290648	$-13.26997 + 0.I$
$u = 0.928106 - 0.575657I$ $a = 0.314063 + 0.194797I$ $b = -0.553504 - 0.808003I$	-0.290648	$-13.26997 + 0.I$
$u = 0.684023 + 0.882805I$ $a = 0.471554 - 0.908141I$ $b = 0.796152 + 0.451692I$	$-1.15366 + 1.27532I$	$-10.53127 - 1.72199I$
$u = 0.684023 - 0.882805I$ $a = 0.471554 + 0.908141I$ $b = 0.796152 - 0.451692I$	$-1.15366 - 1.27532I$	$-10.53127 + 1.72199I$
$u = -0.577755 + 0.986475I$ $a = 0.367269 - 0.263106I$ $b = 1.083960 + 0.732960I$	$2.70026 - 3.63283I$	$-9.34305 + 4.59352I$
$u = -0.577755 - 0.986475I$ $a = 0.367269 + 0.263106I$ $b = 1.083960 - 0.732960I$	$2.70026 + 3.63283I$	$-9.34305 - 4.59352I$
$u = 0.153757 + 0.400659I$ $a = 0.49286 - 2.61690I$ $b = -0.429065 - 0.463862I$	$-1.15366 + 1.27532I$	$-10.53127 - 1.72199I$
$u = 0.153757 - 0.400659I$ $a = 0.49286 + 2.61690I$ $b = -0.429065 + 0.463862I$	$-1.15366 - 1.27532I$	$-10.53127 + 1.72199I$
$u = -1.61868 + 0.98339I$ $a = -0.162363 + 0.219097I$ $b = 1.00687 + 1.86555I$	$2.70026 + 3.63283I$	$-9.34305 - 4.59352I$
$u = -1.61868 - 0.98339I$ $a = -0.162363 - 0.219097I$ $b = 1.00687 - 1.86555I$	$2.70026 - 3.63283I$	$-9.34305 + 4.59352I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.05666+2.24811I$ $a=-0.079508+0.874899I$ $b=\ \ 0.48785-1.75982I$	$12.42750+4.93524I$	$-10.31351-3.19667I$
$u=-0.05666-2.24811I$ $a=-0.079508-0.874899I$ $b=\ \ 0.48785+1.75982I$	$12.42750-4.93524I$	$-10.31351+3.19667I$
$u=-0.14941+2.37106I$ $a=\ \ 0.048233+0.765446I$ $b=\ \ 0.42164-1.94931I$	8.53095	$-13.35437+0.I$
$u=-0.14941-2.37106I$ $a=\ \ 0.048233-0.765446I$ $b=\ \ 0.42164+1.94931I$	8.53095	$-13.35437+0.I$
$u=\ \ 0.13661+2.63887I$ $a=\ \ 0.047894+0.746119I$ $b=-0.81390-2.89913I$	$12.42750-4.93524I$	$-10.31351+3.19667I$
$u=\ \ 0.13661-2.63887I$ $a=\ \ 0.047894-0.746119I$ $b=-0.81390+2.89913I$	$12.42750+4.93524I$	$-10.31351-3.19667I$

IV. $\boldsymbol{I_1^v =}$
$\boldsymbol{\langle a,\ 941v^7+2551v^6+\cdots+887b-1842,\ v^8+2v^7-8v^5-13v^4+28v^3-7v^2-3v+1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ -1.06088v^7 - 2.87599v^6 + \cdots - 4.72604v + 2.07666 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 1.62683v^7 + 3.57497v^6 + \cdots + 1.17926v - 3.82638 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1.62683v^7 - 3.57497v^6 + \cdots - 1.17926v + 4.82638 \\ 1.62683v^7 + 3.57497v^6 + \cdots + 1.17926v - 3.82638 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.321308v^7 + 0.456595v^6 + \cdots + 2.05411v - 1.62683 \\ 0.568207v^7 + 1.17587v^6 + \cdots + 0.443067v - 2.38219 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.755355v^7 + 1.75761v^6 + \cdots - 2.39910v - 1.87711 \\ -2.38219v^7 - 5.33258v^6 + \cdots + 1.21984v + 6.70349 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.244645v^7 + 0.242390v^6 + \cdots - 4.60090v - 1.12289 \\ -3.44419v^7 - 7.94701v^6 + \cdots - 1.00113v + 9.59639 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1.06088v^7 + 2.87599v^6 + \cdots + 4.72604v - 2.07666 \\ 1.57046v^7 + 3.65276v^6 + \cdots + 0.432920v - 5.01466 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1.62683v^7 + 3.57497v^6 + \cdots + 1.17926v - 4.82638 \\ -1.62683v^7 - 3.57497v^6 + \cdots - 1.17926v + 3.82638 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -1.30552v^7 - 3.11838v^6 + \cdots + 0.874859v + 3.19955 \\ 2.19504v^7 + 4.75085v^6 + \cdots + 1.62232v - 6.20857 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{2247}{887}v^7 + \frac{4687}{887}v^6 - \frac{426}{887}v^5 - \frac{21184}{887}v^4 - \frac{35807}{887}v^3 + \frac{61378}{887}v^2 + \frac{5411}{887}v - \frac{17810}{887}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$u^8 + u^7 - 3u^6 - 2u^5 + 3u^4 + 2u - 1$
c_3	$u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1$
c_4	$u^8 - u^7 - 3u^6 + 2u^5 + 3u^4 - 2u - 1$
c_5	$u^8 - 3u^7 + 7u^6 - 10u^5 + 11u^4 - 10u^3 + 6u^2 - 4u + 1$
c_6	u^8
c_7	$u^8 + u^7 - u^6 - 2u^5 + u^4 + 2u^3 - 2u - 1$
c_8	$u^8 + 3u^7 + 7u^6 + 10u^5 + 11u^4 + 10u^3 + 6u^2 + 4u + 1$
c_9	$(u-1)^8$
c_{10}	$u^8 - 2u^7 - u^6 + 5u^5 + 4u^4 - 17u^3 + 17u^2 - 7u + 1$
c_{11}	$u^8 + 3u^7 + 6u^6 + 7u^5 + 13u^4 + 11u^3 + 4u^2 + 3u + 1$
c_{12}	$(u+1)^8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$y^8 - 7y^7 + 19y^6 - 22y^5 + 3y^4 + 14y^3 - 6y^2 - 4y + 1$
c_3, c_7	$y^8 - 3y^7 + 7y^6 - 10y^5 + 11y^4 - 10y^3 + 6y^2 - 4y + 1$
c_5, c_8	$y^8 + 5y^7 + 11y^6 + 6y^5 - 17y^4 - 34y^3 - 22y^2 - 4y + 1$
c_6	y^8
c_9, c_{12}	$(y-1)^8$
c_{10}	$y^8 - 6y^7 + 29y^6 - 67y^5 + 126y^4 - 85y^3 + 59y^2 - 15y + 1$
c_{11}	$y^8 + 3y^7 + 20y^6 + 49y^5 + 47y^4 - 47y^3 - 24y^2 - y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 1.230330 + 0.083902I$ $a = 0$ $b = 0.855237 - 0.665892I$	$0.51448 + 2.57849I$	$-10.11893 - 3.45077I$
$v = 1.230330 - 0.083902I$ $a = 0$ $b = 0.855237 + 0.665892I$	$0.51448 - 2.57849I$	$-10.11893 + 3.45077I$
$v = 0.370895 + 0.073482I$ $a = 0$ $b = -1.031810 - 0.655470I$	$-4.02461 - 6.44354I$	$-10.82984 + 2.68172I$
$v = 0.370895 - 0.073482I$ $a = 0$ $b = -1.031810 + 0.655470I$	$-4.02461 + 6.44354I$	$-10.82984 - 2.68172I$
$v = -0.337834$ $a = 0$ $b = 1.09818$	-8.14766	-12.9880
$v = -1.21928 + 2.03110I$ $a = 0$ $b = -0.570868 - 0.730671I$	$-2.68559 + 1.13123I$	$-18.1377 - 5.3065I$
$v = -1.21928 - 2.03110I$ $a = 0$ $b = -0.570868 + 0.730671I$	$-2.68559 - 1.13123I$	$-18.1377 + 5.3065I$
$v = -2.42604$ $a = 0$ $b = -0.603304$	-2.48997	-13.8390

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_9	$((u-1)^8)(u^8+u^7+\cdots+2u-1)(u^{16}-3u^{15}+\cdots-8u+1)$ $\cdot(u^{17}-7u^{16}+\cdots-5u-1)$
c_3, c_6	$u^8(u^8-u^7+\cdots+2u-1)(u^{16}-u^{15}+\cdots+640u+256)$ $\cdot(u^{17}-u^{16}+\cdots-u+1)$
c_4, c_{12}	$((u+1)^8)(u^8-u^7+\cdots-2u-1)(u^{16}-3u^{15}+\cdots-8u+1)$ $\cdot(u^{17}-7u^{16}+\cdots-5u-1)$
c_5	$(u^8-3u^7+7u^6-10u^5+11u^4-10u^3+6u^2-4u+1)^2$ $\cdot((u^8-u^7+\cdots-2u^3-1)^2)(u^{17}-u^{16}+\cdots+3u-1)$
c_7	$u^8(u^8+u^7+\cdots-2u-1)(u^{16}-u^{15}+\cdots+640u+256)$ $\cdot(u^{17}-u^{16}+\cdots-u+1)$
c_8	$(u^8-u^7+3u^6-2u^5+3u^4-2u^3-1)^2$ $\cdot(u^8+3u^7+7u^6+10u^5+11u^4+10u^3+6u^2+4u+1)^2$ $\cdot(u^{17}-u^{16}+\cdots+3u-1)$
c_{10}	$(u^8-2u^7-u^6+5u^5+4u^4-17u^3+17u^2-7u+1)$ $\cdot(u^8-u^7-3u^6+2u^5+3u^4-2u-1)(u^{16}+3u^{15}+\cdots+2169u+361)$ $\cdot(u^{17}+u^{16}+\cdots-699u+199)$
c_{11}	$(u^8+u^7-u^6-2u^5+u^4+2u^3-2u-1)$ $\cdot(u^8+3u^7+6u^6+7u^5+13u^4+11u^3+4u^2+3u+1)$ $\cdot(u^{16}-4u^{15}+\cdots-189u+297)(u^{17}+3u^{16}+\cdots-263u-83)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_9, c_{12}	$(y-1)^8(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot\,(y^{16}+9y^{15}+\cdots+4y+1)(y^{17}-13y^{16}+\cdots+21y-1)$
c_3, c_6, c_7	$y^8(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot\,(y^{16}+33y^{15}+\cdots+606208y+65536)(y^{17}+15y^{16}+\cdots+13y-1)$
c_5, c_8	$(y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1)^2$ $\cdot\,(y^8+5y^7+11y^6+10y^5-y^4-10y^3-6y^2+1)^2$ $\cdot\,(y^{17}+11y^{16}+\cdots+25y-1)$
c_{10}	$(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot\,(y^8-6y^7+29y^6-67y^5+126y^4-85y^3+59y^2-15y+1)$ $\cdot\,(y^{16}+31y^{15}+\cdots-741503y+130321)$ $\cdot\,(y^{17}+27y^{16}+\cdots+947097y-39601)$
c_{11}	$(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot\,(y^8+3y^7+20y^6+49y^5+47y^4-47y^3-24y^2-y+1)$ $\cdot\,(y^{16}+32y^{15}+\cdots+78327y+88209)$ $\cdot\,(y^{17}+7y^{16}+\cdots+91413y-6889)$