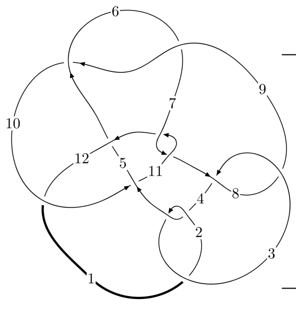
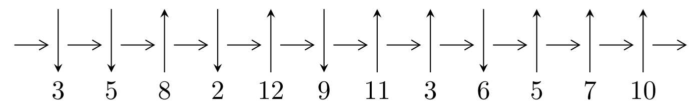
$12n_{0252}$ ($K12n_{0252}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 1.74295 \times 10^{297} u^{66} + 2.18772 \times 10^{297} u^{65} + \cdots + 1.47028 \times 10^{301} b - 2.20085 \times 10^{301}, \\
& 6.14451 \times 10^{299} u^{66} + 6.93121 \times 10^{299} u^{65} + \cdots + 1.44088 \times 10^{303} a - 3.76767 \times 10^{303}, \\
& u^{67} + u^{66} + \cdots + 43008u - 25088 \rangle \\
I_2^u = \langle & 94430u^{13} - 176465u^{12} + \cdots + 3057583b - 933114, \\
& 14500551u^{13} - 6850118u^{12} + \cdots + 3057583a + 662027, \\
& u^{14} + 3u^{12} + 3u^{11} - 5u^{10} - 4u^9 - 11u^8 - 8u^7 + 12u^6 - 8u^5 + 20u^4 + 6u^2 + u + 1 \rangle
\end{aligned}$$

$$\begin{aligned}
I_1^v = \langle & a,\ 82026v^8 - 2033115v^7 + \cdots + 764761b - 1552510, \\
& 7v^9 - 3v^8 + 2v^7 + 14v^6 - 23v^5 - 33v^4 - v^3 + 8v^2 + v - 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 90 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. $I_1^u = \langle 1.74 \times 10^{297} u^{66} + 2.19 \times 10^{297} u^{65} + \cdots + 1.47 \times 10^{301} b - 2.20 \times 10^{301},\ 6.14 \times 10^{299} u^{66} + 6.93 \times 10^{299} u^{65} + \cdots + 1.44 \times 10^{303} a - 3.77 \times 10^{303},\ u^{67} + u^{66} + \cdots + 43008 u - 25088 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.000426443u^{66} - 0.000481041u^{65} + \cdots + 23.8714u + 2.61485 \\ -0.000118545u^{66} - 0.000148796u^{65} + \cdots + 1.19020u + 1.49689 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.000247541u^{66} - 0.000147912u^{65} + \cdots + 24.8866u - 6.57361 \\ -0.0000205091u^{66} + 0.0000421361u^{65} + \cdots + 10.5559u - 4.84697 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.000153563u^{66} + 0.000170524u^{65} + \cdots - 8.86925u - 0.350734 \\ 0.0000954123u^{66} + 0.0000873267u^{65} + \cdots - 8.78651u + 0.999057 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.000167486u^{66} - 0.0000324937u^{65} + \cdots + 24.9473u - 8.92109 \\ 7.23133 \times 10^{-6}u^{66} + 0.0000863901u^{65} + \cdots + 10.0683u - 5.73416 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.0000140055u^{66} - 0.0000216075u^{65} + \cdots + 1.31456u + 0.105113 \\ -7.78737 \times 10^{-6}u^{66} - 0.0000120618u^{65} + \cdots + 0.998848u - 0.412656 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 6.21813 \times 10^{-6}u^{66} + 9.54570 \times 10^{-6}u^{65} + \cdots - 0.315708u - 0.517768 \\ -7.78737 \times 10^{-6}u^{66} - 0.0000120618u^{65} + \cdots + 0.998848u - 0.412656 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.000359878u^{66} - 0.000389095u^{65} + \cdots + 22.6042u + 1.99943 \\ -0.0000816759u^{66} - 0.0000928007u^{65} + \cdots + 1.70659u + 1.44097 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -6.21813 \times 10^{-6}u^{66} - 9.54570 \times 10^{-6}u^{65} + \cdots + 0.315708u + 0.517768 \\ 4.29248 \times 10^{-6}u^{66} + 5.85448 \times 10^{-6}u^{65} + \cdots - 0.985959u + 0.496138 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.000336583u^{66} + 0.000559671u^{65} + \cdots - 0.882700u - 3.59196$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{67} + 78u^{66} + \cdots + 171200u + 2401$
c_2, c_4	$u^{67} - 16u^{66} + \cdots + 120u - 49$
c_3, c_8	$u^{67} + u^{66} + \cdots + 43008u - 25088$
c_5	$u^{67} + 4u^{66} + \cdots - 2u - 1$
c_6, c_9	$u^{67} - 3u^{66} + \cdots + 781u - 209$
c_7, c_{11}	$u^{67} - 2u^{66} + \cdots + 3200u - 773$
c_{10}	$u^{67} + u^{66} + \cdots + 566773u - 256243$
c_{12}	$u^{67} + 12u^{66} + \cdots - 77902u - 10969$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{67} - 162y^{66} + \cdots + 5062883876y - 5764801$
c_2, c_4	$y^{67} - 78y^{66} + \cdots + 171200y - 2401$
c_3, c_8	$y^{67} + 63y^{66} + \cdots - 2491940864y - 629407744$
c_5	$y^{67} - 10y^{66} + \cdots - 44y - 1$
c_6, c_9	$y^{67} + 33y^{66} + \cdots - 240251y - 43681$
c_7, c_{11}	$y^{67} + 62y^{66} + \cdots - 18480042y - 597529$
c_{10}	$y^{67} + 43y^{66} + \cdots + 161121782381y - 65660475049$
c_{12}	$y^{67} + 16y^{66} + \cdots - 1081596550y - 120318961$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.972237 + 0.280854I$ $a = 0.153697 + 0.835171I$ $b = 0.437985 + 0.887119I$	$3.39425 - 2.09087I$	$8.43522 + 3.94985I$
$u = -0.972237 - 0.280854I$ $a = 0.153697 - 0.835171I$ $b = 0.437985 - 0.887119I$	$3.39425 + 2.09087I$	$8.43522 - 3.94985I$
$u = -0.111044 + 1.030770I$ $a = -0.447368 - 0.244256I$ $b = -1.094900 + 0.275542I$	$0.89656 - 5.19617I$	$2.00000 + 8.56770I$
$u = -0.111044 - 1.030770I$ $a = -0.447368 + 0.244256I$ $b = -1.094900 - 0.275542I$	$0.89656 + 5.19617I$	$2.00000 - 8.56770I$
$u = 0.502448 + 0.771343I$ $a = 0.544773 + 0.292063I$ $b = 0.060296 - 0.570771I$	$0.42745 + 2.04731I$	$1.79133 - 2.30943I$
$u = 0.502448 - 0.771343I$ $a = 0.544773 - 0.292063I$ $b = 0.060296 + 0.570771I$	$0.42745 - 2.04731I$	$1.79133 + 2.30943I$
$u = -0.163401 + 0.813880I$ $a = 0.496846 + 0.323676I$ $b = 0.477457 + 0.309386I$	$-1.58473 + 1.12240I$	$-2.95098 - 3.87144I$
$u = -0.163401 - 0.813880I$ $a = 0.496846 - 0.323676I$ $b = 0.477457 - 0.309386I$	$-1.58473 - 1.12240I$	$-2.95098 + 3.87144I$
$u = -0.687972 + 0.429990I$ $a = 1.266640 - 0.347433I$ $b = -0.201497 + 0.581210I$	$-2.34582 + 0.79184I$	$-1.70277 + 1.36728I$
$u = -0.687972 - 0.429990I$ $a = 1.266640 + 0.347433I$ $b = -0.201497 - 0.581210I$	$-2.34582 - 0.79184I$	$-1.70277 - 1.36728I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.423056 + 1.121960I$ $a = 0.352233 - 0.211840I$ $b = -0.121837 + 0.470824I$	$-4.49098 - 4.90499I$	0
$u = -0.423056 - 1.121960I$ $a = 0.352233 + 0.211840I$ $b = -0.121837 - 0.470824I$	$-4.49098 + 4.90499I$	0
$u = -0.683441 + 0.994440I$ $a = 1.027540 + 0.560982I$ $b = 0.204096 + 1.284980I$	$-2.72054 + 1.47592I$	0
$u = -0.683441 - 0.994440I$ $a = 1.027540 - 0.560982I$ $b = 0.204096 - 1.284980I$	$-2.72054 - 1.47592I$	0
$u = 0.412259 + 0.668041I$ $a = -1.50421 + 0.97445I$ $b = -0.172196 - 0.202734I$	$0.01538 + 1.90218I$	$1.03416 - 1.99152I$
$u = 0.412259 - 0.668041I$ $a = -1.50421 - 0.97445I$ $b = -0.172196 + 0.202734I$	$0.01538 - 1.90218I$	$1.03416 + 1.99152I$
$u = -0.734728 + 0.191087I$ $a = 0.112393 - 1.136120I$ $b = 0.561939 - 0.465578I$	$3.56178 + 1.95197I$	$9.44446 - 1.83557I$
$u = -0.734728 - 0.191087I$ $a = 0.112393 + 1.136120I$ $b = 0.561939 + 0.465578I$	$3.56178 - 1.95197I$	$9.44446 + 1.83557I$
$u = 0.705362 + 0.112303I$ $a = -3.77447 - 2.00026I$ $b = 0.813283 + 0.575619I$	$-0.78374 + 3.24647I$	$3.36554 - 8.05825I$
$u = 0.705362 - 0.112303I$ $a = -3.77447 + 2.00026I$ $b = 0.813283 - 0.575619I$	$-0.78374 - 3.24647I$	$3.36554 + 8.05825I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.489130 + 0.496557I$ $a = 0.706509 + 0.025107I$ $b = -0.474253 - 0.853751I$	$0.85096 + 2.02536I$	$5.69785 - 3.31418I$
$u = 0.489130 - 0.496557I$ $a = 0.706509 - 0.025107I$ $b = -0.474253 + 0.853751I$	$0.85096 - 2.02536I$	$5.69785 + 3.31418I$
$u = 0.058657 + 0.664653I$ $a = 3.17421 - 5.05999I$ $b = 0.191481 - 0.813702I$	$0.17719 - 3.22158I$	$-2.38086 + 5.47011I$
$u = 0.058657 - 0.664653I$ $a = 3.17421 + 5.05999I$ $b = 0.191481 + 0.813702I$	$0.17719 + 3.22158I$	$-2.38086 - 5.47011I$
$u = 0.028062 + 0.629541I$ $a = 0.49260 + 4.74733I$ $b = -0.14410 + 1.55613I$	$-3.79798 - 0.21805I$	$-3.18632 - 4.76372I$
$u = 0.028062 - 0.629541I$ $a = 0.49260 - 4.74733I$ $b = -0.14410 - 1.55613I$	$-3.79798 + 0.21805I$	$-3.18632 + 4.76372I$
$u = 0.580709 + 0.074213I$ $a = -0.089310 - 0.454917I$ $b = 0.661587 - 1.030950I$	$2.35238 - 6.89299I$	$11.67033 + 2.73841I$
$u = 0.580709 - 0.074213I$ $a = -0.089310 + 0.454917I$ $b = 0.661587 + 1.030950I$	$2.35238 + 6.89299I$	$11.67033 - 2.73841I$
$u = -0.568924 + 0.015800I$ $a = 0.637282 + 0.021987I$ $b = -0.145375 + 1.079460I$	$-2.33563 - 2.09946I$	$2.27732 + 3.69468I$
$u = -0.568924 - 0.015800I$ $a = 0.637282 - 0.021987I$ $b = -0.145375 - 1.079460I$	$-2.33563 + 2.09946I$	$2.27732 - 3.69468I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.22902 + 1.42563I$ $a = 0.400700 + 0.341672I$ $b = -0.973416 + 0.760612I$	$-4.88346 - 3.38279I$	0
$u = -0.22902 - 1.42563I$ $a = 0.400700 - 0.341672I$ $b = -0.973416 - 0.760612I$	$-4.88346 + 3.38279I$	0
$u = -0.06118 + 1.47148I$ $a = -0.29720 - 1.59844I$ $b = 0.29319 - 1.42982I$	$-7.03108 - 4.31642I$	0
$u = -0.06118 - 1.47148I$ $a = -0.29720 + 1.59844I$ $b = 0.29319 + 1.42982I$	$-7.03108 + 4.31642I$	0
$u = -0.116938 + 0.471533I$ $a = 1.48070 + 0.04601I$ $b = -0.579484 - 0.806307I$	$0.98108 + 2.41958I$	$3.63595 + 0.97039I$
$u = -0.116938 - 0.471533I$ $a = 1.48070 - 0.04601I$ $b = -0.579484 + 0.806307I$	$0.98108 - 2.41958I$	$3.63595 - 0.97039I$
$u = 1.50349 + 0.34050I$ $a = 0.228982 + 0.612751I$ $b = -0.015855 + 0.949567I$	$2.74618 + 3.31023I$	0
$u = 1.50349 - 0.34050I$ $a = 0.228982 - 0.612751I$ $b = -0.015855 - 0.949567I$	$2.74618 - 3.31023I$	0
$u = 1.55291 + 0.23943I$ $a = 0.441195 - 0.352617I$ $b = -0.16237 - 1.50460I$	$-8.96576 + 1.05371I$	0
$u = 1.55291 - 0.23943I$ $a = 0.441195 + 0.352617I$ $b = -0.16237 + 1.50460I$	$-8.96576 - 1.05371I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.52715 + 1.48204I$ $a = 0.33123 + 1.39860I$ $b = 0.00718 + 1.48631I$	$-6.16260 - 2.01828I$	0
$u = -0.52715 - 1.48204I$ $a = 0.33123 - 1.39860I$ $b = 0.00718 - 1.48631I$	$-6.16260 + 2.01828I$	0
$u = 0.413083$ $a = 0.972725$ $b = -0.464092$	0.931638	11.2120
$u = 0.14745 + 1.66191I$ $a = 0.18463 + 1.55098I$ $b = -0.037097 + 1.367450I$	$-8.02419 + 4.33010I$	0
$u = 0.14745 - 1.66191I$ $a = 0.18463 - 1.55098I$ $b = -0.037097 - 1.367450I$	$-8.02419 - 4.33010I$	0
$u = 0.45724 + 1.63971I$ $a = -0.105350 - 0.203867I$ $b = -1.68138 - 0.13047I$	$-6.70242 + 8.43737I$	0
$u = 0.45724 - 1.63971I$ $a = -0.105350 + 0.203867I$ $b = -1.68138 + 0.13047I$	$-6.70242 - 8.43737I$	0
$u = 0.05684 + 1.70857I$ $a = 0.180435 - 1.130630I$ $b = -0.67565 - 1.87495I$	$-12.22050 + 0.78224I$	0
$u = 0.05684 - 1.70857I$ $a = 0.180435 + 1.130630I$ $b = -0.67565 + 1.87495I$	$-12.22050 - 0.78224I$	0
$u = -0.13255 + 1.73913I$ $a = -0.171385 - 0.159888I$ $b = 1.169480 - 0.041809I$	$-10.39740 - 2.64649I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.13255 - 1.73913I$ $a = -0.171385 + 0.159888I$ $b = 1.169480 + 0.041809I$	$-10.39740 + 2.64649I$	0
$u = 0.41326 + 1.75472I$ $a = 0.181612 - 1.340600I$ $b = -0.39611 - 1.52166I$	$-5.00803 + 10.48120I$	0
$u = 0.41326 - 1.75472I$ $a = 0.181612 + 1.340600I$ $b = -0.39611 + 1.52166I$	$-5.00803 - 10.48120I$	0
$u = 0.65145 + 1.69788I$ $a = -0.683854 + 1.063280I$ $b = 0.60126 + 1.43364I$	$-14.9522 + 8.9665I$	0
$u = 0.65145 - 1.69788I$ $a = -0.683854 - 1.063280I$ $b = 0.60126 - 1.43364I$	$-14.9522 - 8.9665I$	0
$u = 0.92464 + 1.58340I$ $a = 0.504493 - 1.126250I$ $b = -0.26248 - 1.61175I$	$-12.8012 + 7.6595I$	0
$u = 0.92464 - 1.58340I$ $a = 0.504493 + 1.126250I$ $b = -0.26248 + 1.61175I$	$-12.8012 - 7.6595I$	0
$u = -0.91168 + 1.66821I$ $a = 0.578974 + 1.151070I$ $b = -0.65416 + 1.61603I$	$-12.2648 - 16.4135I$	0
$u = -0.91168 - 1.66821I$ $a = 0.578974 - 1.151070I$ $b = -0.65416 - 1.61603I$	$-12.2648 + 16.4135I$	0
$u = 0.07685 + 1.90361I$ $a = -0.199072 + 1.200950I$ $b = -0.07346 + 1.43637I$	$-5.56017 - 2.92233I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.07685 - 1.90361I$ $a = -0.199072 - 1.200950I$ $b = -0.07346 - 1.43637I$	$-5.56017 + 2.92233I$	0
$u = -1.91592 + 0.19283I$ $a = 0.054081 + 0.394492I$ $b = 0.22984 + 1.53586I$	$-7.74590 + 6.82406I$	0
$u = -1.91592 - 0.19283I$ $a = 0.054081 - 0.394492I$ $b = 0.22984 - 1.53586I$	$-7.74590 - 6.82406I$	0
$u = -0.29235 + 2.06576I$ $a = -0.133137 - 0.969631I$ $b = 0.94220 - 1.66248I$	$-13.6589 - 4.4760I$	0
$u = -0.29235 - 2.06576I$ $a = -0.133137 + 0.969631I$ $b = 0.94220 + 1.66248I$	$-13.6589 + 4.4760I$	0
$u = -0.73570 + 2.03169I$ $a = -0.449491 - 0.922084I$ $b = 0.44638 - 1.35702I$	$-14.4098 - 3.1017I$	0
$u = -0.73570 - 2.03169I$ $a = -0.449491 + 0.922084I$ $b = 0.44638 + 1.35702I$	$-14.4098 + 3.1017I$	0

II. $\boldsymbol{I_2^u = \langle 9.44\times 10^4 u^{13} - 1.76\times 10^5 u^{12} + \cdots + 3.06\times 10^6 b - 9.33\times 10^5,\ 1.45\times 10^7 u^{13} - 6.85\times 10^6 u^{12} + \cdots + 3.06\times 10^6 a + 6.62\times 10^5,\ u^{14} + 3u^{12} + \cdots + u + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -4.74249u^{13} + 2.24037u^{12} + \cdots - 19.2443u - 0.216520 \\ -0.0308839u^{13} + 0.0577139u^{12} + \cdots - 1.36605u + 0.305180 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -4.09128u^{13} - 0.679940u^{12} + \cdots - 7.20444u - 8.41674 \\ -0.316204u^{13} - 0.0156306u^{12} + \cdots - 1.02247u - 0.0647390 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -3.61004u^{13} + 0.407185u^{12} + \cdots - 9.65877u - 7.47936 \\ 0.0490374u^{13} - 0.177945u^{12} + \cdots - 2.06678u - 0.528005 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -3.45688u^{13} - 0.525854u^{12} + \cdots - 3.45569u - 7.80154 \\ -0.366126u^{13} + 0.0265635u^{12} + \cdots - 0.233986u + 0.0893477 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.671228u^{13} - 0.305180u^{12} + \cdots + 3.86235u + 0.615272 \\ -0.0499215u^{13} + 0.0421941u^{12} + \cdots + 0.788488u + 0.154087 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.721149u^{13} + 0.347374u^{12} + \cdots - 3.07386u - 0.461186 \\ -0.0499215u^{13} + 0.0421941u^{12} + \cdots + 0.788488u + 0.154087 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -3.70513u^{13} + 1.90863u^{12} + \cdots - 15.1479u - 0.690595 \\ 0.123441u^{13} - 0.00225636u^{12} + \cdots - 1.44893u - 0.180650 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.721149u^{13} + 0.347374u^{12} + \cdots - 3.07386u - 0.461186 \\ -0.0528928u^{13} + 0.242971u^{12} + \cdots + 0.414713u + 0.501461 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1775462}{3057583}u^{13} - \frac{19500832}{3057583}u^{12} + \cdots + \frac{38299827}{3057583}u - \frac{57496355}{3057583}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{14} - 14u^{13} + \cdots - 5u + 1$
c_2	$u^{14} + 6u^{13} + \cdots - 3u + 1$
c_3	$u^{14} + 3u^{12} + \cdots - u + 1$
c_4	$u^{14} - 6u^{13} + \cdots + 3u + 1$
c_5	$u^{14} - 6u^{13} + \cdots - 3u + 1$
c_6	$u^{14} - 3u^{13} + \cdots + 7u^2 + 1$
c_7	$u^{14} + 7u^{12} + \cdots + 3u + 1$
c_8	$u^{14} + 3u^{12} + \cdots + u + 1$
c_9	$u^{14} + 3u^{13} + \cdots + 7u^2 + 1$
c_{10}	$u^{14} + 3u^{13} + \cdots + 6u + 1$
c_{11}	$u^{14} + 7u^{12} + \cdots - 3u + 1$
c_{12}	$u^{14} + 2u^{12} + \cdots - 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{14} - 22y^{13} + \cdots + 143y + 1$
c_2, c_4	$y^{14} - 14y^{13} + \cdots - 5y + 1$
c_3, c_8	$y^{14} + 6y^{13} + \cdots + 11y + 1$
c_5	$y^{14} - 10y^{13} + \cdots - 5y + 1$
c_6, c_9	$y^{14} + 9y^{13} + \cdots + 14y + 1$
c_7, c_{11}	$y^{14} + 14y^{13} + \cdots + 9y + 1$
c_{10}	$y^{14} - 5y^{13} + \cdots - 10y + 1$
c_{12}	$y^{14} + 4y^{13} + \cdots + 5y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.139126 + 0.855284I$ $a = \ \ 1.28622 - 2.46844I$ $b = \ \ 0.10927 - 1.56543I$	$-3.95141 - 0.77135I$	$-5.32487 + 5.66602I$
$u = \ \ 0.139126 - 0.855284I$ $a = \ \ 1.28622 + 2.46844I$ $b = \ \ 0.10927 + 1.56543I$	$-3.95141 + 0.77135I$	$-5.32487 - 5.66602I$
$u = -0.352449 + 1.175430I$ $a = \ \ 0.288296 - 0.319682I$ $b = -0.341781 + 0.418746I$	$-4.21220 - 5.05550I$	$8.55629 + 11.07069I$
$u = -0.352449 - 1.175430I$ $a = \ \ 0.288296 + 0.319682I$ $b = -0.341781 - 0.418746I$	$-4.21220 + 5.05550I$	$8.55629 - 11.07069I$
$u = \ \ 1.229090 + 0.054546I$ $a = -0.142585 - 0.788390I$ $b = -0.262265 - 0.901818I$	$3.33140 + 3.93339I$	$7.31083 - 8.00848I$
$u = \ \ 1.229090 - 0.054546I$ $a = -0.142585 + 0.788390I$ $b = -0.262265 + 0.901818I$	$3.33140 - 3.93339I$	$7.31083 + 8.00848I$
$u = \ \ 0.196848 + 0.556043I$ $a = \ \ 0.05395 + 1.80422I$ $b = -0.381345 - 0.641179I$	$1.09831 + 3.21998I$	$6.98104 - 7.97611I$
$u = \ \ 0.196848 - 0.556043I$ $a = \ \ 0.05395 - 1.80422I$ $b = -0.381345 + 0.641179I$	$1.09831 - 3.21998I$	$6.98104 + 7.97611I$
$u = -1.40215 + 0.37579I$ $a = -0.112945 - 0.655306I$ $b = -0.283501 - 1.095790I$	$2.59518 - 1.77882I$	$-1.86373 - 1.12551I$
$u = -1.40215 - 0.37579I$ $a = -0.112945 + 0.655306I$ $b = -0.283501 + 1.095790I$	$2.59518 + 1.77882I$	$-1.86373 + 1.12551I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.229849 + 0.360057I$ $a = -7.66848 - 11.11940I$ $b = 0.420766 - 0.730987I$	$-0.20979 - 2.65520I$	$-8.5897 + 20.4516I$
$u = -0.229849 - 0.360057I$ $a = -7.66848 + 11.11940I$ $b = 0.420766 + 0.730987I$	$-0.20979 + 2.65520I$	$-8.5897 - 20.4516I$
$u = 0.41939 + 2.04733I$ $a = -0.204449 + 0.988880I$ $b = 0.73885 + 1.60027I$	$-13.45590 + 4.02567I$	$2.43011 + 2.33585I$
$u = 0.41939 - 2.04733I$ $a = -0.204449 - 0.988880I$ $b = 0.73885 - 1.60027I$	$-13.45590 - 4.02567I$	$2.43011 - 2.33585I$

III. $\boldsymbol{I_1^v = \langle a,\ 8.20 \times 10^4 v^8 - 2.03 \times 10^6 v^7 + \cdots + 7.65 \times 10^5 b - 1.55 \times 10^6,\ 7v^9 - 3v^8 + \cdots + v - 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -0.107257v^8 + 2.65850v^7 + \cdots - 0.280187v + 2.03006 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 2.14626v^8 + 0.185889v^7 + \cdots - 0.429870v + 1.30771 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.107257v^8 + 2.65850v^7 + \cdots - 0.280187v + 2.03006 \\ -1.38456v^8 + 4.21937v^7 + \cdots - 2.55986v + 1.77273 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2.14626v^8 + 0.185889v^7 + \cdots - 0.429870v + 2.30771 \\ 2.14626v^8 + 0.185889v^7 + \cdots - 0.429870v + 1.30771 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1.01346v^8 - 0.464403v^7 + \cdots + 1.07485v + 0.182471 \\ 7v^8 - 3v^7 + 2v^6 + 14v^5 - 23v^4 - 33v^3 - v^2 + 8v + 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1.01346v^8 + 0.464403v^7 + \cdots - 0.0748548v - 0.182471 \\ -7v^8 + 3v^7 - 2v^6 - 14v^5 + 23v^4 + 33v^3 + v^2 - 8v - 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -5.30121v^8 + 5.22147v^7 + \cdots - 3.83160v + 0.359036 \\ -7.44747v^8 + 5.03558v^7 + \cdots - 3.40173v - 1.94867 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1.01346v^8 + 0.464403v^7 + \cdots - 1.07485v - 0.182471 \\ -7v^8 + 3v^7 - 2v^6 - 14v^5 + 23v^4 + 33v^3 + v^2 - 8v - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{17698695}{764761}v^8 - \frac{786460}{764761}v^7 - \frac{4755547}{764761}v^6 - \frac{34014228}{764761}v^5 + \frac{35615785}{764761}v^4 + \frac{111023508}{764761}v^3 + \frac{50152809}{764761}v^2 - \frac{10570795}{764761}v - \frac{8852191}{764761}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_8	u^9
c_4	$(u+1)^9$
c_5	$u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1$
c_6	$u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1$
c_7	$u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1$
c_9	$u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1$
c_{10}, c_{12}	$u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1$
c_{11}	$u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_8	y^9
c_5	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_6, c_9	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_7, c_{11}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_{10}, c_{12}	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = -0.903964 + 0.094390I$ $a = 0$ $b = -0.140343 + 0.966856I$	$-3.42837 - 2.09337I$	$-6.50768 + 4.08340I$
$v = -0.903964 - 0.094390I$ $a = 0$ $b = -0.140343 - 0.966856I$	$-3.42837 + 2.09337I$	$-6.50768 - 4.08340I$
$v = 1.42091$ $a = 0$ $b = -0.512358$	-0.446489	2.13810
$v = -0.476406 + 0.294981I$ $a = 0$ $b = 0.796005 + 0.733148I$	$2.72642 - 1.33617I$	$1.72452 - 1.86826I$
$v = -0.476406 - 0.294981I$ $a = 0$ $b = 0.796005 - 0.733148I$	$2.72642 + 1.33617I$	$1.72452 + 1.86826I$
$v = 0.352455 + 0.113243I$ $a = 0$ $b = 0.728966 - 0.986295I$	$1.95319 - 7.08493I$	$-4.46574 + 10.08360I$
$v = 0.352455 - 0.113243I$ $a = 0$ $b = 0.728966 + 0.986295I$	$1.95319 + 7.08493I$	$-4.46574 - 10.08360I$
$v = 0.53175 + 1.59553I$ $a = 0$ $b = -0.628449 + 0.875112I$	$-1.02799 - 2.45442I$	$0.87375 + 1.42824I$
$v = 0.53175 - 1.59553I$ $a = 0$ $b = -0.628449 - 0.875112I$	$-1.02799 + 2.45442I$	$0.87375 - 1.42824I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^{14}-14u^{13}+\cdots-5u+1)$ $\cdot(u^{67}+78u^{66}+\cdots+171200u+2401)$
c_2	$((u-1)^9)(u^{14}+6u^{13}+\cdots-3u+1)(u^{67}-16u^{66}+\cdots+120u-49)$
c_3	$u^9(u^{14}+3u^{12}+\cdots-u+1)(u^{67}+u^{66}+\cdots+43008u-25088)$
c_4	$((u+1)^9)(u^{14}-6u^{13}+\cdots+3u+1)(u^{67}-16u^{66}+\cdots+120u-49)$
c_5	$(u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1)$ $\cdot(u^{14}-6u^{13}+\cdots-3u+1)(u^{67}+4u^{66}+\cdots-2u-1)$
c_6	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{14}-3u^{13}+\cdots+7u^2+1)(u^{67}-3u^{66}+\cdots+781u-209)$
c_7	$(u^9-u^8+\cdots+u+1)(u^{14}+7u^{12}+\cdots+3u+1)$ $\cdot(u^{67}-2u^{66}+\cdots+3200u-773)$
c_8	$u^9(u^{14}+3u^{12}+\cdots+u+1)(u^{67}+u^{66}+\cdots+43008u-25088)$
c_9	$(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{14}+3u^{13}+\cdots+7u^2+1)(u^{67}-3u^{66}+\cdots+781u-209)$
c_{10}	$(u^9+u^8+\cdots-u-1)(u^{14}+3u^{13}+\cdots+6u+1)$ $\cdot(u^{67}+u^{66}+\cdots+566773u-256243)$
c_{11}	$(u^9+u^8+\cdots+u-1)(u^{14}+7u^{12}+\cdots-3u+1)$ $\cdot(u^{67}-2u^{66}+\cdots+3200u-773)$
c_{12}	$(u^9+u^8+\cdots-u-1)(u^{14}+2u^{12}+\cdots-5u+1)$ $\cdot(u^{67}+12u^{66}+\cdots-77902u-10969)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^{14}-22y^{13}+\cdots+143y+1)$ $\cdot(y^{67}-162y^{66}+\cdots+5062883876y-5764801)$
c_2, c_4	$((y-1)^9)(y^{14}-14y^{13}+\cdots-5y+1)$ $\cdot(y^{67}-78y^{66}+\cdots+171200y-2401)$
c_3, c_8	$y^9(y^{14}+6y^{13}+\cdots+11y+1)$ $\cdot(y^{67}+63y^{66}+\cdots-2491940864y-629407744)$
c_5	$(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{14}-10y^{13}+\cdots-5y+1)(y^{67}-10y^{66}+\cdots-44y-1)$
c_6, c_9	$(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{14}+9y^{13}+\cdots+14y+1)(y^{67}+33y^{66}+\cdots-240251y-43681)$
c_7, c_{11}	$(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{14}+14y^{13}+\cdots+9y+1)$ $\cdot(y^{67}+62y^{66}+\cdots-18480042y-597529)$
c_{10}	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{14}-5y^{13}+\cdots-10y+1)$ $\cdot(y^{67}+43y^{66}+\cdots+161121782381y-65660475049)$
c_{12}	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{14}+4y^{13}+\cdots+5y+1)$ $\cdot(y^{67}+16y^{66}+\cdots-1081596550y-120318961)$