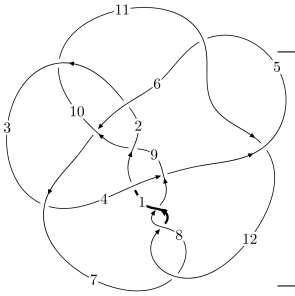
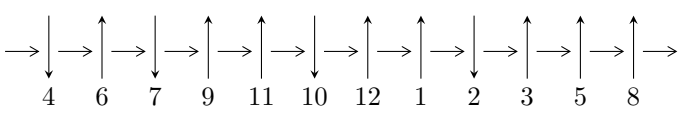
$12a_{0871}$ $(K12a_{0871})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.80079 \times 10^{1000} u^{138} + 3.01263 \times 10^{1000} u^{137} + \cdots + 9.21046 \times 10^{999} b + 1.47252 \times 10^{1000}, \\ & - 3.52539 \times 10^{999} u^{138} - 7.82925 \times 10^{998} u^{137} + \cdots + 9.21046 \times 10^{999} a - 2.10793 \times 10^{1000}, \\ & 5u^{139} + 6u^{138} + \cdots + 7u - 1 \rangle \\ I_2^u = \langle & -3.15864 \times 10^{37} u^{27} - 2.23009 \times 10^{38} u^{26} + \cdots + 1.72151 \times 10^{35} b - 1.40370 \times 10^{37}, \\ & - 1.15651 \times 10^{38} u^{27} - 8.15998 \times 10^{38} u^{26} + \cdots + 1.72151 \times 10^{35} a - 5.00345 \times 10^{37}, \\ & 5u^{28} + 33u^{27} + \cdots + 3u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 167 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. $I_1^u = \langle 1.80 \times 10^{1000} u^{138} + 3.01 \times 10^{1000} u^{137} + \cdots + 9.21 \times 10^{999} b + 1.47 \times 10^{1000},\ -3.53 \times 10^{999} u^{138} - 7.83 \times 10^{998} u^{137} + \cdots + 9.21 \times 10^{999} a - 2.11 \times 10^{1000},\ 5u^{139} + 6u^{138} + \cdots + 7u - 1 \rangle$

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 0.382760u^{138} + 0.0850039u^{137} + \cdots - 50.6825u + 2.28863 \\ -1.95515u^{138} - 3.27088u^{137} + \cdots + 5.78117u - 1.59875 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 2.22730u^{138} + 3.34356u^{137} + \cdots - 55.8631u + 3.81252 \\ -1.30760u^{138} - 2.14564u^{137} + \cdots + 4.68692u - 1.38973 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.67273u^{138} + 7.93391u^{137} + \cdots - 23.1138u - 4.60306 \\ 1.35292u^{138} + 2.48173u^{137} + \cdots + 0.210969u - 0.0658331 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.33791u^{138} + 3.35588u^{137} + \cdots - 56.4637u + 3.88738 \\ -1.95515u^{138} - 3.27088u^{137} + \cdots + 5.78117u - 1.59875 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -4.38463u^{138} - 8.32463u^{137} + \cdots - 32.1407u + 2.35356 \\ -1.10194u^{138} - 2.10304u^{137} + \cdots + 4.27185u - 1.04163 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.269116u^{138} + 0.793757u^{137} + \cdots - 10.8788u + 4.40556 \\ -0.861170u^{138} - 1.19922u^{137} + \cdots - 1.11359u - 1.62966 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -14.5571u^{138} - 24.2886u^{137} + \cdots + 59.8087u - 4.14929 \\ -1.68970u^{138} - 3.29711u^{137} + \cdots + 4.79931u - 0.320587 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 3.20950u^{138} + 5.01416u^{137} + \cdots - 23.9423u - 3.84170 \\ 0.110306u^{138} + 0.438015u^{137} + \cdots + 2.61756u - 0.695526 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.875161u^{138} + 4.27144u^{137} + \cdots - 9.78423u - 1.97659 \\ 1.90839u^{138} + 3.38088u^{137} + \cdots + 3.96701u - 0.143899 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -16.2600u^{138} - 26.4039u^{137} + \cdots + 39.3754u - 2.10248$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$5(5u^{139}+44u^{138}+\cdots-138u+207)$
c_2	$u^{139}+23u^{137}+\cdots+1342610u+79075$
c_3	$u^{139}-4u^{138}+\cdots+9955539065u-2811030979$
c_4	$u^{139}+u^{138}+\cdots+132792u-9535$
c_5, c_{11}	$5(5u^{139}-6u^{138}+\cdots+1.08748\times10^{7}u+3500629)$
c_6	$5(5u^{139}-6u^{138}+\cdots+7u+1)$
c_7, c_8, c_{12}	$u^{139}+u^{138}+\cdots+3436u+335$
c_9	$u^{139}-36u^{137}+\cdots+911022429u-918419671$
c_{10}	$u^{139}+2u^{138}+\cdots-161606u+44905$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$25(25y^{139} - 376y^{138} + \cdots + 5015196y - 42849)$
c_2	$y^{139} + 46y^{138} + \cdots - 50108241400y - 6252855625$
c_3	$y^{139} - 52y^{138} + \cdots + 2.84 \times 10^{20}y - 7.90 \times 10^{18}$
c_4	$y^{139} - y^{138} + \cdots + 15265736154y - 90916225$
c_5, c_{11}	$25 \cdot (25y^{139} + 2274y^{138} + \cdots + 494385524795298y - 12254403395641)$
c_6	$25(25y^{139} - 1076y^{138} + \cdots + y - 1)$
c_7, c_8, c_{12}	$y^{139} - 133y^{138} + \cdots - 2468254y - 112225$
c_9	$y^{139} - 72y^{138} + \cdots + 4.72 \times 10^{19}y - 8.43 \times 10^{17}$
c_{10}	$y^{139} + 26y^{138} + \cdots - 67481776374y - 2016459025$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.454159 + 0.925702I$ $a = 0.433657 + 1.045870I$ $b = -0.556673 + 0.354972I$	$1.56214 - 3.03714I$	0
$u = 0.454159 - 0.925702I$ $a = 0.433657 - 1.045870I$ $b = -0.556673 - 0.354972I$	$1.56214 + 3.03714I$	0
$u = -0.545285 + 0.799666I$ $a = -0.76183 + 1.80296I$ $b = 0.889411 + 0.684684I$	$3.70539 + 10.84170I$	0
$u = -0.545285 - 0.799666I$ $a = -0.76183 - 1.80296I$ $b = 0.889411 - 0.684684I$	$3.70539 - 10.84170I$	0
$u = 0.579540 + 0.856958I$ $a = -0.81515 - 1.44704I$ $b = 0.989461 - 0.709822I$	$-1.62905 - 6.09919I$	0
$u = 0.579540 - 0.856958I$ $a = -0.81515 + 1.44704I$ $b = 0.989461 + 0.709822I$	$-1.62905 + 6.09919I$	0
$u = 0.512414 + 0.802283I$ $a = -0.134631 - 0.653974I$ $b = 0.898303 - 0.996558I$	$1.03847 - 3.81042I$	0
$u = 0.512414 - 0.802283I$ $a = -0.134631 + 0.653974I$ $b = 0.898303 + 0.996558I$	$1.03847 + 3.81042I$	0
$u = -1.032020 + 0.194301I$ $a = -0.92778 - 1.65014I$ $b = -0.311234 - 0.727864I$	$-1.07058 + 4.85081I$	0
$u = -1.032020 - 0.194301I$ $a = -0.92778 + 1.65014I$ $b = -0.311234 + 0.727864I$	$-1.07058 - 4.85081I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.317012+1.009220I$ $a=\ \ 0.024118-1.114040I$ $b=-0.57254-1.80463I$	$3.91816+8.58212I$	0
$u=-0.317012-1.009220I$ $a=\ \ 0.024118+1.114040I$ $b=-0.57254+1.80463I$	$3.91816-8.58212I$	0
$u=-0.358199+0.999813I$ $a=\ \ 0.055652+0.541167I$ $b=\ \ 0.90570+1.10239I$	$6.96221+5.11889I$	0
$u=-0.358199-0.999813I$ $a=\ \ 0.055652-0.541167I$ $b=\ \ 0.90570-1.10239I$	$6.96221-5.11889I$	0
$u=-0.345236+1.004870I$ $a=\ \ 0.205548-0.698744I$ $b=-0.622097-0.311021I$	$2.04191-1.41526I$	0
$u=-0.345236-1.004870I$ $a=\ \ 0.205548+0.698744I$ $b=-0.622097+0.311021I$	$2.04191+1.41526I$	0
$u=-0.857338+0.641083I$ $a=\ \ 0.851243-0.478779I$ $b=-0.307343-0.640466I$	$2.98587+0.74386I$	0
$u=-0.857338-0.641083I$ $a=\ \ 0.851243+0.478779I$ $b=-0.307343+0.640466I$	$2.98587-0.74386I$	0
$u=\ \ 0.929112+0.000626I$ $a=-1.26622-1.56043I$ $b=-0.283437-0.747004I$	$-6.02192+2.58152I$	0
$u=\ \ 0.929112-0.000626I$ $a=-1.26622+1.56043I$ $b=-0.283437+0.747004I$	$-6.02192-2.58152I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.275231+1.045340I$ $a=-0.361649+0.389825I$ $b=-0.856942+0.145353I$	$2.01281+2.83927I$	0
$u=-0.275231-1.045340I$ $a=-0.361649-0.389825I$ $b=-0.856942-0.145353I$	$2.01281-2.83927I$	0
$u=\ 0.487669+0.764261I$ $a=-0.394995-0.525292I$ $b=-0.879480-0.189002I$	$-2.88075-1.07465I$	0
$u=\ 0.487669-0.764261I$ $a=-0.394995+0.525292I$ $b=-0.879480+0.189002I$	$-2.88075+1.07465I$	0
$u=-0.597979+0.663487I$ $a=-0.132314+1.224530I$ $b=\ 0.837696+0.818188I$	$1.69040+2.58209I$	0
$u=-0.597979-0.663487I$ $a=-0.132314-1.224530I$ $b=\ 0.837696-0.818188I$	$1.69040-2.58209I$	0
$u=-1.112970+0.017737I$ $a=\ 0.359835-0.688759I$ $b=\ 0.91354-1.24565I$	$0.93563-6.68754I$	0
$u=-1.112970-0.017737I$ $a=\ 0.359835+0.688759I$ $b=\ 0.91354+1.24565I$	$0.93563+6.68754I$	0
$u=-0.575742+0.953904I$ $a=\ 0.168929-1.223110I$ $b=-0.559038-0.428056I$	$7.87824+6.61806I$	0
$u=-0.575742-0.953904I$ $a=\ 0.168929+1.223110I$ $b=-0.559038+0.428056I$	$7.87824-6.61806I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.501428 + 0.720235I$ $a = -0.07202 - 1.55219I$ $b = 0.873672 - 0.767181I$	$7.99970 - 1.36692I$	0
$u = 0.501428 - 0.720235I$ $a = -0.07202 + 1.55219I$ $b = 0.873672 + 0.767181I$	$7.99970 + 1.36692I$	0
$u = 0.864462 + 0.036717I$ $a = 0.415148 - 0.649210I$ $b = -0.409048 - 0.636701I$	$-2.05815 - 0.28164I$	0
$u = 0.864462 - 0.036717I$ $a = 0.415148 + 0.649210I$ $b = -0.409048 + 0.636701I$	$-2.05815 + 0.28164I$	0
$u = -1.035100 + 0.472436I$ $a = -1.16379 + 0.84962I$ $b = -0.232650 + 0.758383I$	$-3.18324 - 0.97148I$	0
$u = -1.035100 - 0.472436I$ $a = -1.16379 - 0.84962I$ $b = -0.232650 - 0.758383I$	$-3.18324 + 0.97148I$	0
$u = -0.774721 + 0.835973I$ $a = -0.595369 + 1.188130I$ $b = 1.018810 + 0.900468I$	$1.75155 + 0.93943I$	0
$u = -0.774721 - 0.835973I$ $a = -0.595369 - 1.188130I$ $b = 1.018810 - 0.900468I$	$1.75155 - 0.93943I$	0
$u = 0.817341 + 0.195341I$ $a = 0.204775 - 0.801112I$ $b = 1.25221 - 1.87533I$	$-5.28197 - 1.01152I$	0
$u = 0.817341 - 0.195341I$ $a = 0.204775 + 0.801112I$ $b = 1.25221 + 1.87533I$	$-5.28197 + 1.01152I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.983298 + 0.633060I$ $a = -0.059502 + 1.200200I$ $b = -0.99841 + 1.36559I$	$-4.02455 - 5.06834I$	0
$u = 0.983298 - 0.633060I$ $a = -0.059502 - 1.200200I$ $b = -0.99841 - 1.36559I$	$-4.02455 + 5.06834I$	0
$u = -0.815116 + 0.839011I$ $a = 0.398743 - 0.348381I$ $b = 0.42801 - 1.36675I$	$1.51467 + 4.82372I$	0
$u = -0.815116 - 0.839011I$ $a = 0.398743 + 0.348381I$ $b = 0.42801 + 1.36675I$	$1.51467 - 4.82372I$	0
$u = 0.484530 + 0.665994I$ $a = 0.061350 + 1.180790I$ $b = -0.98511 + 1.80947I$	$-3.35447 - 5.91360I$	0
$u = 0.484530 - 0.665994I$ $a = 0.061350 - 1.180790I$ $b = -0.98511 - 1.80947I$	$-3.35447 + 5.91360I$	0
$u = 0.355169 + 1.128710I$ $a = 0.009783 + 0.766365I$ $b = -0.682362 + 0.341294I$	$8.55394 + 4.38913I$	0
$u = 0.355169 - 1.128710I$ $a = 0.009783 - 0.766365I$ $b = -0.682362 - 0.341294I$	$8.55394 - 4.38913I$	0
$u = 0.731637 + 0.293858I$ $a = -1.11313 - 1.30768I$ $b = 0.682606 - 0.819383I$	$3.43176 - 6.69109I$	0
$u = 0.731637 - 0.293858I$ $a = -1.11313 + 1.30768I$ $b = 0.682606 + 0.819383I$	$3.43176 + 6.69109I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.733476 + 0.210444I$ $a = 2.58997 + 1.29698I$ $b = -0.023515 + 0.661031I$	$0.09986 - 10.07060I$	0
$u = 0.733476 - 0.210444I$ $a = 2.58997 - 1.29698I$ $b = -0.023515 - 0.661031I$	$0.09986 + 10.07060I$	0
$u = 1.231920 + 0.289750I$ $a = 0.321374 + 0.498605I$ $b = 0.49412 + 1.60140I$	$-4.17320 + 1.01953I$	0
$u = 1.231920 - 0.289750I$ $a = 0.321374 - 0.498605I$ $b = 0.49412 - 1.60140I$	$-4.17320 - 1.01953I$	0
$u = -0.089882 + 0.725958I$ $a = -0.97317 - 1.32370I$ $b = -0.235341 + 0.556648I$	$-3.74565 - 1.35219I$	0
$u = -0.089882 - 0.725958I$ $a = -0.97317 + 1.32370I$ $b = -0.235341 - 0.556648I$	$-3.74565 + 1.35219I$	0
$u = 0.672419 + 0.214980I$ $a = -1.25963 + 2.53653I$ $b = -0.104128 + 0.790192I$	$-1.70245 + 0.96159I$	0
$u = 0.672419 - 0.214980I$ $a = -1.25963 - 2.53653I$ $b = -0.104128 - 0.790192I$	$-1.70245 - 0.96159I$	0
$u = -0.615705 + 0.256123I$ $a = 3.17364 - 0.62542I$ $b = -0.049646 - 0.595641I$	$-5.52303 + 6.10934I$	0
$u = -0.615705 - 0.256123I$ $a = 3.17364 + 0.62542I$ $b = -0.049646 + 0.595641I$	$-5.52303 - 6.10934I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.631994+0.161465I$ $a=-1.55237-2.49186I$ $b=-0.227100-0.829357I$	$-5.99163+1.30767I$	0
$u=-0.631994-0.161465I$ $a=-1.55237+2.49186I$ $b=-0.227100+0.829357I$	$-5.99163-1.30767I$	0
$u=-0.628832+0.154188I$ $a=0.610632+1.142230I$ $b=-0.655466+1.071690I$	$-1.95329+3.36933I$	0
$u=-0.628832-0.154188I$ $a=0.610632-1.142230I$ $b=-0.655466-1.071690I$	$-1.95329-3.36933I$	0
$u=0.635921+0.088468I$ $a=0.059146-1.367840I$ $b=-1.22700-0.95709I$	$-1.63754-2.16969I$	0
$u=0.635921-0.088468I$ $a=0.059146+1.367840I$ $b=-1.22700+0.95709I$	$-1.63754+2.16969I$	0
$u=-0.938174+0.984075I$ $a=-0.202303+0.359761I$ $b=-0.732719+0.104372I$	$0.943475+0.180216I$	0
$u=-0.938174-0.984075I$ $a=-0.202303-0.359761I$ $b=-0.732719-0.104372I$	$0.943475-0.180216I$	0
$u=-1.006700+0.934775I$ $a=-0.013762+0.832761I$ $b=0.86086+1.56528I$	$3.48061+5.90359I$	0
$u=-1.006700-0.934775I$ $a=-0.013762-0.832761I$ $b=0.86086-1.56528I$	$3.48061-5.90359I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.144940+0.773503I$ $a=-0.081075-1.118290I$ $b=-0.92413-1.24542I$	$-7.14691+7.50851I$	0
$u=-1.144940-0.773503I$ $a=-0.081075+1.118290I$ $b=-0.92413+1.24542I$	$-7.14691-7.50851I$	0
$u=-0.566022+0.226737I$ $a=-1.60142+1.04892I$ $b=0.680772+0.629248I$	$-1.63260+3.62503I$	$0.-7.01965I$
$u=-0.566022-0.226737I$ $a=-1.60142-1.04892I$ $b=0.680772-0.629248I$	$-1.63260-3.62503I$	$0.+7.01965I$
$u=-1.210000+0.693149I$ $a=0.482400-0.217523I$ $b=-0.183573-0.566721I$	$3.16663+1.03587I$	0
$u=-1.210000-0.693149I$ $a=0.482400+0.217523I$ $b=-0.183573+0.566721I$	$3.16663-1.03587I$	0
$u=0.419153+0.429170I$ $a=2.48762-1.61431I$ $b=-0.144438+0.526974I$	$-3.82277-1.67156I$	$4.00000+8.20740I$
$u=0.419153-0.429170I$ $a=2.48762+1.61431I$ $b=-0.144438-0.526974I$	$-3.82277+1.67156I$	$4.00000-8.20740I$
$u=0.559088+0.215093I$ $a=0.79671-1.40979I$ $b=-0.725517-1.212240I$	$4.16059-6.26171I$	$4.00000+6.52713I$
$u=0.559088-0.215093I$ $a=0.79671+1.40979I$ $b=-0.725517+1.212240I$	$4.16059+6.26171I$	$4.00000-6.52713I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.578150+0.072378I$ $a=\ 0.236700-0.861457I$ $b=\ 1.98816-1.67942I$	$-5.47215+5.31432I$	$-12.4517-9.3806I$
$u=-0.578150-0.072378I$ $a=\ 0.236700+0.861457I$ $b=\ 1.98816+1.67942I$	$-5.47215-5.31432I$	$-12.4517+9.3806I$
$u=-0.94004+1.07350I$ $a=-0.017882+0.795941I$ $b=\ 0.527630+1.221600I$	$3.91030+5.63479I$	0
$u=-0.94004-1.07350I$ $a=-0.017882-0.795941I$ $b=\ 0.527630-1.221600I$	$3.91030-5.63479I$	0
$u=\ 0.502775+0.259723I$ $a=\ 0.204571+0.901891I$ $b=\ 2.14262+1.10273I$	$1.15881-10.16980I$	$-0.6406+16.1383I$
$u=\ 0.502775-0.259723I$ $a=\ 0.204571-0.901891I$ $b=\ 2.14262-1.10273I$	$1.15881+10.16980I$	$-0.6406-16.1383I$
$u=-0.498559+0.209737I$ $a=\ 0.123636-1.345490I$ $b=-1.62724-1.42770I$	$-5.44288+1.47386I$	$-9.42398-6.09833I$
$u=-0.498559-0.209737I$ $a=\ 0.123636+1.345490I$ $b=-1.62724+1.42770I$	$-5.44288-1.47386I$	$-9.42398+6.09833I$
$u=\ 0.490861+0.196741I$ $a=-1.76872+3.08258I$ $b=-0.314830+0.921638I$	$-2.09911-3.09769I$	$2.52105+7.06130I$
$u=\ 0.490861-0.196741I$ $a=-1.76872-3.08258I$ $b=-0.314830-0.921638I$	$-2.09911+3.09769I$	$2.52105-7.06130I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.25977 + 0.80522I$ $a = -0.122478 + 1.054350I$ $b = -0.94227 + 1.15404I$	$-2.64330 - 10.05980I$	0
$u = 1.25977 - 0.80522I$ $a = -0.122478 - 1.054350I$ $b = -0.94227 - 1.15404I$	$-2.64330 + 10.05980I$	0
$u = 1.10994 + 1.02993I$ $a = 0.034787 + 1.134560I$ $b = -0.69484 + 1.27072I$	$-6.11196 - 6.88546I$	0
$u = 1.10994 - 1.02993I$ $a = 0.034787 - 1.134560I$ $b = -0.69484 - 1.27072I$	$-6.11196 + 6.88546I$	0
$u = 1.16827 + 0.98211I$ $a = -0.009802 - 0.671229I$ $b = 0.466002 - 0.947757I$	$-2.04557 - 3.54333I$	0
$u = 1.16827 - 0.98211I$ $a = -0.009802 + 0.671229I$ $b = 0.466002 + 0.947757I$	$-2.04557 + 3.54333I$	0
$u = 1.04939 + 1.11131I$ $a = -0.626890 - 0.390471I$ $b = -0.066671 - 0.719893I$	$-5.89507 - 1.03350I$	0
$u = 1.04939 - 1.11131I$ $a = -0.626890 + 0.390471I$ $b = -0.066671 + 0.719893I$	$-5.89507 + 1.03350I$	0
$u = 1.13153 + 1.04471I$ $a = -0.121044 - 0.952270I$ $b = 1.03040 - 1.35187I$	$-6.17357 - 9.38764I$	0
$u = 1.13153 - 1.04471I$ $a = -0.121044 + 0.952270I$ $b = 1.03040 + 1.35187I$	$-6.17357 + 9.38764I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.03106+1.14561I$ $a=\ \ 0.018688-1.169490I$ $b=-0.64092-1.34652I$	$-1.73219+8.36924I$	0
$u=-1.03106-1.14561I$ $a=\ \ 0.018688+1.169490I$ $b=-0.64092+1.34652I$	$-1.73219-8.36924I$	0
$u=-1.15362+1.06200I$ $a=-0.088134+1.011790I$ $b=\ \ 1.00054+1.31698I$	$-7.1312+15.1507I$	0
$u=-1.15362-1.06200I$ $a=-0.088134-1.011790I$ $b=\ \ 1.00054-1.31698I$	$-7.1312-15.1507I$	0
$u=-1.21185+1.01611I$ $a=\ \ 0.102880-1.110870I$ $b=-0.645899-1.179020I$	$-1.90033+5.26365I$	0
$u=-1.21185-1.01611I$ $a=\ \ 0.102880+1.110870I$ $b=-0.645899+1.179020I$	$-1.90033-5.26365I$	0
$u=-0.009942+0.410551I$ $a=-0.19377-1.95750I$ $b=\ \ 1.051090-0.282577I$	$7.26060-0.44792I$	$12.96344-0.73898I$
$u=-0.009942-0.410551I$ $a=-0.19377+1.95750I$ $b=\ \ 1.051090+0.282577I$	$7.26060+0.44792I$	$12.96344+0.73898I$
$u=\ \ 1.16831+1.08373I$ $a=-0.053637-1.033410I$ $b=\ \ 0.98438-1.30778I$	$-0.8364-19.5945I$	0
$u=\ \ 1.16831-1.08373I$ $a=-0.053637+1.033410I$ $b=\ \ 0.98438+1.30778I$	$-0.8364+19.5945I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.18647 + 1.08891I$ $a = 0.131418 + 0.649119I$ $b = -0.745703 + 0.843714I$	$-1.65423 - 4.97090I$	0
$u = 1.18647 - 1.08891I$ $a = 0.131418 - 0.649119I$ $b = -0.745703 - 0.843714I$	$-1.65423 + 4.97090I$	0
$u = 0.333334 + 0.086020I$ $a = -3.31141 - 0.16769I$ $b = 0.652072 - 0.186479I$	$0.347375 - 0.135300I$	$11.76125 + 3.15246I$
$u = 0.333334 - 0.086020I$ $a = -3.31141 + 0.16769I$ $b = 0.652072 + 0.186479I$	$0.347375 + 0.135300I$	$11.76125 - 3.15246I$
$u = -1.28028 + 1.07012I$ $a = -0.021607 - 0.709952I$ $b = -0.830795 - 0.878277I$	$-1.41370 + 9.46023I$	0
$u = -1.28028 - 1.07012I$ $a = -0.021607 + 0.709952I$ $b = -0.830795 + 0.878277I$	$-1.41370 - 9.46023I$	0
$u = 1.64581 + 0.44067I$ $a = 0.278482 - 0.479146I$ $b = 0.741249 - 0.651181I$	$4.05125 + 1.73784I$	0
$u = 1.64581 - 0.44067I$ $a = 0.278482 + 0.479146I$ $b = 0.741249 + 0.651181I$	$4.05125 - 1.73784I$	0
$u = -1.17316 + 1.24243I$ $a = 0.123073 - 0.379581I$ $b = -0.709722 - 0.761145I$	$4.83149 + 1.08715I$	0
$u = -1.17316 - 1.24243I$ $a = 0.123073 + 0.379581I$ $b = -0.709722 + 0.761145I$	$4.83149 - 1.08715I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.26040 + 1.15540I$ $a = 0.371400 + 0.273144I$ $b = 0.034679 + 1.022870I$	$-5.96169 + 0.95106I$	0
$u = 1.26040 - 1.15540I$ $a = 0.371400 - 0.273144I$ $b = 0.034679 - 1.022870I$	$-5.96169 - 0.95106I$	0
$u = 1.33557 + 1.09559I$ $a = -0.111703 + 0.680656I$ $b = -0.887064 + 0.851809I$	$5.05232 - 12.72990I$	0
$u = 1.33557 - 1.09559I$ $a = -0.111703 - 0.680656I$ $b = -0.887064 - 0.851809I$	$5.05232 + 12.72990I$	0
$u = -1.54200 + 0.79273I$ $a = 0.114483 + 0.494540I$ $b = 0.549281 + 0.699482I$	$-1.81510 + 0.49244I$	0
$u = -1.54200 - 0.79273I$ $a = 0.114483 - 0.494540I$ $b = 0.549281 - 0.699482I$	$-1.81510 - 0.49244I$	0
$u = -1.26738 + 1.18985I$ $a = -0.427396 + 0.574021I$ $b = 0.020829 + 0.824776I$	$-1.42422 + 3.51843I$	0
$u = -1.26738 - 1.18985I$ $a = -0.427396 - 0.574021I$ $b = 0.020829 - 0.824776I$	$-1.42422 - 3.51843I$	0
$u = -0.236924$ $a = 2.20153$ $b = 0.435206$	0.794229	12.4310
$u = -1.29484 + 1.23940I$ $a = 0.406008 - 0.268017I$ $b = 0.141468 - 0.896273I$	$-6.85359 - 6.49863I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.29484-1.23940I$ $a=\ \ 0.406008+0.268017I$ $b=\ \ 0.141468+0.896273I$	$-6.85359+6.49863I$	0
$u=-0.094100+0.118558I$ $a=\ \ 5.90150+3.38437I$ $b=-0.929370+1.060970I$	$3.68943-4.85621I$	$8.33889+2.35560I$
$u=-0.094100-0.118558I$ $a=\ \ 5.90150-3.38437I$ $b=-0.929370-1.060970I$	$3.68943+4.85621I$	$8.33889-2.35560I$
$u=\ \ 1.35589+1.28224I$ $a=\ \ 0.421769+0.260887I$ $b=\ \ 0.172363+0.823818I$	$-0.59569+10.72620I$	0
$u=\ \ 1.35589-1.28224I$ $a=\ \ 0.421769-0.260887I$ $b=\ \ 0.172363-0.823818I$	$-0.59569-10.72620I$	0
$u=\ \ 0.0660922+0.0936501I$ $a=-3.07496-7.99149I$ $b=-1.075710+0.468338I$	$-3.02252-1.91759I$	$3.73120+4.31493I$
$u=\ \ 0.0660922-0.0936501I$ $a=-3.07496+7.99149I$ $b=-1.075710-0.468338I$	$-3.02252+1.91759I$	$3.73120-4.31493I$
$u=-2.88099$ $a=\ \ 0.120081$ $b=-0.200030$	1.24668	0
$u=\ \ 2.98199$ $a=\ \ 0.182194$ $b=\ \ 0.508908$	1.07227	0

II. $I_2^u = \langle -3.16 \times 10^{37} u^{27} - 2.23 \times 10^{38} u^{26} + \cdots + 1.72 \times 10^{35} b - 1.40 \times 10^{37},\ -1.16 \times 10^{38} u^{27} - 8.16 \times 10^{38} u^{26} + \cdots + 1.72 \times 10^{35} a - 5.00 \times 10^{37},\ 5u^{28} + 33u^{27} + \cdots + 3u - 1 \rangle$

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 671.803u^{27} + 4740.02u^{26} + \cdots - 240.048u + 290.644 \\ 183.481u^{27} + 1295.43u^{26} + \cdots - 65.8536u + 81.5388 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 628.295u^{27} + 4431.73u^{26} + \cdots - 223.509u + 270.330 \\ 173.624u^{27} + 1225.73u^{26} + \cdots - 61.8736u + 77.3116 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2465.95u^{27} - 17382.0u^{26} + \cdots + 852.690u - 1099.68 \\ -372.411u^{27} - 2621.37u^{26} + \cdots + 120.759u - 169.093 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 488.322u^{27} + 3444.59u^{26} + \cdots - 174.194u + 209.105 \\ 183.481u^{27} + 1295.43u^{26} + \cdots - 65.8536u + 81.5388 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 660.620u^{27} + 4645.16u^{26} + \cdots - 205.822u + 307.709 \\ 95.0908u^{27} + 670.121u^{26} + \cdots - 35.7213u + 42.1151 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2408.59u^{27} - 16930.0u^{26} + \cdots + 757.766u - 1119.00 \\ -23.4798u^{27} - 164.198u^{26} + \cdots + 5.03978u - 14.2574 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1397.71u^{27} + 9862.96u^{26} + \cdots - 495.752u + 614.029 \\ 310.534u^{27} + 2184.63u^{26} + \cdots - 102.826u + 142.238 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1740.25u^{27} - 12272.3u^{26} + \cdots + 619.039u - 772.358 \\ -353.296u^{27} - 2488.38u^{26} + \cdots + 114.893u - 158.228 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1005.12u^{27} - 7089.04u^{26} + \cdots + 357.983u - 444.544 \\ -292.100u^{27} - 2060.87u^{26} + \cdots + 102.084u - 127.364 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 643.001u^{27} + 4565.08u^{26} + \cdots - 263.510u + 263.109$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$5(5u^{28} - 23u^{27} + \cdots + 8u - 1)$
c_2	$u^{28} - u^{27} + \cdots + 8u - 5$
c_3	$u^{28} + 7u^{27} + \cdots - 15u + 1$
c_4	$u^{28} + 4u^{26} + \cdots + 22u - 5$
c_5	$5(5u^{28} + 23u^{27} + \cdots + 16u - 1)$
c_6	$5(5u^{28} + 33u^{27} + \cdots + 3u - 1)$
c_7, c_8	$u^{28} - 14u^{26} + \cdots - 16u - 5$
c_9	$u^{28} - u^{27} + \cdots - 3u + 1$
c_{10}	$u^{28} - u^{27} + \cdots + 18u - 5$
c_{11}	$5(5u^{28} - 23u^{27} + \cdots - 16u - 1)$
c_{12}	$u^{28} - 14u^{26} + \cdots + 16u - 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$25(25y^{28} - 679y^{27} + \cdots - 16y + 1)$
c_2	$y^{28} + 19y^{27} + \cdots - 784y + 25$
c_3	$y^{28} - 7y^{27} + \cdots - 125y + 1$
c_4	$y^{28} + 8y^{27} + \cdots - 614y + 25$
c_5, c_{11}	$25(25y^{28} + 171y^{27} + \cdots - 30y + 1)$
c_6	$25(25y^{28} - 679y^{27} + \cdots - 29y + 1)$
c_7, c_8, c_{12}	$y^{28} - 28y^{27} + \cdots - 146y + 25$
c_9	$y^{28} - 15y^{27} + \cdots + 61y + 1$
c_{10}	$y^{28} + 3y^{27} + \cdots - 34y + 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.375537+0.908959I$ $a=-0.419864+0.941622I$ $b=\ \ 0.375754+1.173510I$	$5.99435+6.10849I$	$7.86640-7.03827I$
$u=-0.375537-0.908959I$ $a=-0.419864-0.941622I$ $b=\ \ 0.375754-1.173510I$	$5.99435-6.10849I$	$7.86640+7.03827I$
$u=\ \ 0.536304+0.812141I$ $a=-0.437441-0.811355I$ $b=\ \ 0.667741-0.875405I$	$0.34667-3.66787I$	$1.90881+6.77780I$
$u=\ \ 0.536304-0.812141I$ $a=-0.437441+0.811355I$ $b=\ \ 0.667741+0.875405I$	$0.34667+3.66787I$	$1.90881-6.77780I$
$u=-0.878472+0.562488I$ $a=-0.468900+0.958110I$ $b=-0.418888+0.809345I$	$-0.28577+2.75438I$	$3.07087-2.91509I$
$u=-0.878472-0.562488I$ $a=-0.468900-0.958110I$ $b=-0.418888-0.809345I$	$-0.28577-2.75438I$	$3.07087+2.91509I$
$u=-0.904597+0.078680I$ $a=-0.87667-1.77475I$ $b=-0.420914-0.861703I$	$-2.61367+2.03309I$	$-0.43249-3.01662I$
$u=-0.904597-0.078680I$ $a=-0.87667+1.77475I$ $b=-0.420914+0.861703I$	$-2.61367-2.03309I$	$-0.43249+3.01662I$
$u=\ \ 1.097610+0.206815I$ $a=-0.315527-0.583039I$ $b=-0.74081-1.53148I$	$-4.34831+0.83141I$	$-4.51787+8.76566I$
$u=\ \ 1.097610-0.206815I$ $a=-0.315527+0.583039I$ $b=-0.74081+1.53148I$	$-4.34831-0.83141I$	$-4.51787-8.76566I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.886387+0.743109I$ $a=-0.131593-0.863477I$ $b=-0.77605-1.72910I$	$2.93039+6.50271I$	$3.62346-10.61490I$
$u=-0.886387-0.743109I$ $a=-0.131593+0.863477I$ $b=-0.77605+1.72910I$	$2.93039-6.50271I$	$3.62346+10.61490I$
$u=\ 0.629738+0.507538I$ $a=-0.972574-0.262845I$ $b=-0.330778-1.097170I$	$-4.80377+0.54369I$	$-1.91796-0.05430I$
$u=\ 0.629738-0.507538I$ $a=-0.972574+0.262845I$ $b=-0.330778+1.097170I$	$-4.80377-0.54369I$	$-1.91796+0.05430I$
$u=\ 0.685641$ $a=\ 1.89909$ $b=-0.185357$	-0.252884	-2.15640
$u=-1.090140+0.861739I$ $a=-0.204407+0.520785I$ $b=\ 0.761784+0.601784I$	$4.52838+0.56273I$	0
$u=-1.090140-0.861739I$ $a=-0.204407-0.520785I$ $b=\ 0.761784-0.601784I$	$4.52838-0.56273I$	0
$u=\ 1.06202+0.95575I$ $a=\ 0.041681+1.110010I$ $b=-0.79533+1.28829I$	$-5.64873-6.71284I$	0
$u=\ 1.06202-0.95575I$ $a=\ 0.041681-1.110010I$ $b=-0.79533-1.28829I$	$-5.64873+6.71284I$	0
$u=\ 0.473673+0.165860I$ $a=-0.20638+1.66181I$ $b=\ 1.162000-0.458164I$	$1.37627+9.52114I$	$4.52699-4.03433I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.473673 - 0.165860I$ $a = -0.20638 - 1.66181I$ $b = 1.162000 + 0.458164I$	$1.37627 - 9.52114I$	$4.52699 + 4.03433I$
$u = -1.14419 + 0.97425I$ $a = -0.047944 - 1.189140I$ $b = -0.678421 - 1.237390I$	$-1.97747 + 7.67744I$	0
$u = -1.14419 - 0.97425I$ $a = -0.047944 + 1.189140I$ $b = -0.678421 + 1.237390I$	$-1.97747 - 7.67744I$	0
$u = 0.441726 + 0.008989I$ $a = -4.32415 - 2.17189I$ $b = -0.131013 - 0.639309I$	$-4.36155 + 1.32316I$	$-9.31478 - 2.17152I$
$u = 0.441726 - 0.008989I$ $a = -4.32415 + 2.17189I$ $b = -0.131013 + 0.639309I$	$-4.36155 - 1.32316I$	$-9.31478 + 2.17152I$
$u = -0.357621 + 0.193316I$ $a = -1.12045 - 1.61343I$ $b = 0.777494 + 1.072400I$	$-4.83906 - 5.20210I$	$1.75952 + 5.15190I$
$u = -0.357621 - 0.193316I$ $a = -1.12045 + 1.61343I$ $b = 0.777494 - 1.072400I$	$-4.83906 + 5.20210I$	$1.75952 - 5.15190I$
$u = -4.49390$ $a = 0.0693211$ $b = 0.280244$	1.33846	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$25(5u^{28}-23u^{27}+\cdots+8u-1)(5u^{139}+44u^{138}+\cdots-138u+207)$
c_2	$(u^{28}-u^{27}+\cdots+8u-5)(u^{139}+23u^{137}+\cdots+1342610u+79075)$
c_3	$(u^{28}+7u^{27}+\cdots-15u+1)$ $\cdot(u^{139}-4u^{138}+\cdots+9955539065u-2811030979)$
c_4	$(u^{28}+4u^{26}+\cdots+22u-5)(u^{139}+u^{138}+\cdots+132792u-9535)$
c_5	$25(5u^{28}+23u^{27}+\cdots+16u-1)$ $\cdot(5u^{139}-6u^{138}+\cdots+10874800u+3500629)$
c_6	$25(5u^{28}+33u^{27}+\cdots+3u-1)(5u^{139}-6u^{138}+\cdots+7u+1)$
c_7, c_8	$(u^{28}-14u^{26}+\cdots-16u-5)(u^{139}+u^{138}+\cdots+3436u+335)$
c_9	$(u^{28}-u^{27}+\cdots-3u+1)$ $\cdot(u^{139}-36u^{137}+\cdots+911022429u-918419671)$
c_{10}	$(u^{28}-u^{27}+\cdots+18u-5)(u^{139}+2u^{138}+\cdots-161606u+44905)$
c_{11}	$25(5u^{28}-23u^{27}+\cdots-16u-1)$ $\cdot(5u^{139}-6u^{138}+\cdots+10874800u+3500629)$
c_{12}	$(u^{28}-14u^{26}+\cdots+16u-5)(u^{139}+u^{138}+\cdots+3436u+335)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$625(25y^{28} - 679y^{27} + \cdots - 16y + 1)$ $\cdot (25y^{139} - 376y^{138} + \cdots + 5015196y - 42849)$
c_2	$(y^{28} + 19y^{27} + \cdots - 784y + 25)$ $\cdot (y^{139} + 46y^{138} + \cdots - 50108241400y - 6252855625)$
c_3	$(y^{28} - 7y^{27} + \cdots - 125y + 1)$ $\cdot (y^{139} - 52y^{138} + \cdots + 2.84 \times 10^{20}y - 7.90 \times 10^{18})$
c_4	$(y^{28} + 8y^{27} + \cdots - 614y + 25)$ $\cdot (y^{139} - y^{138} + \cdots + 15265736154y - 90916225)$
c_5, c_{11}	$625(25y^{28} + 171y^{27} + \cdots - 30y + 1)$ $\cdot (25y^{139} + 2274y^{138} + \cdots + 494385524795298y - 12254403395641)$
c_6	$625(25y^{28} - 679y^{27} + \cdots - 29y + 1)(25y^{139} - 1076y^{138} + \cdots + y - 1)$
c_7, c_8, c_{12}	$(y^{28} - 28y^{27} + \cdots - 146y + 25)$ $\cdot (y^{139} - 133y^{138} + \cdots - 2468254y - 112225)$
c_9	$(y^{28} - 15y^{27} + \cdots + 61y + 1)$ $\cdot (y^{139} - 72y^{138} + \cdots + 4.72 \times 10^{19}y - 8.43 \times 10^{17})$
c_{10}	$(y^{28} + 3y^{27} + \cdots - 34y + 25)$ $\cdot (y^{139} + 26y^{138} + \cdots - 67481776374y - 2016459025)$