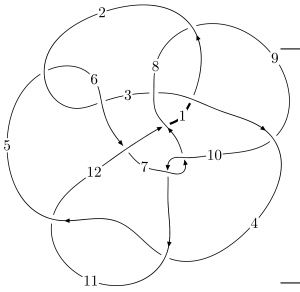
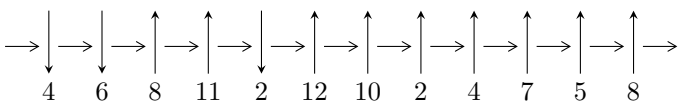
$12n_{0769}$ $(K12n_{0769})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 3.83864 \times 10^{337} u^{65} - 1.18349 \times 10^{338} u^{64} + \cdots + 1.06451 \times 10^{342} b - 1.02256 \times 10^{342}, \\ & - 1.56678 \times 10^{341} u^{65} + 4.83301 \times 10^{341} u^{64} + \cdots + 1.39504 \times 10^{345} a - 4.89344 \times 10^{345}, \\ & u^{66} - 3u^{65} + \cdots + 1022u - 2621 \rangle \\ I_2^u = \langle & -5.16198 \times 10^{14} u^{22} + 4.96659 \times 10^{15} u^{21} + \cdots + 6.69596 \times 10^{15} b - 5.25349 \times 10^{15}, \\ & - 1.04392 \times 10^{16} u^{22} + 4.70651 \times 10^{16} u^{21} + \cdots + 6.69596 \times 10^{15} a + 1.86768 \times 10^{16}, \ u^{23} - 4u^{22} + \cdots - 2u - \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 89 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. $\boldsymbol{I_1^u = \langle 3.84 \times 10^{337} u^{65} - 1.18 \times 10^{338} u^{64} + \cdots + 1.06 \times 10^{342} b - 1.02 \times 10^{342},\ -1.57 \times 10^{341} u^{65} + 4.83 \times 10^{341} u^{64} + \cdots + 1.40 \times 10^{345} a - 4.89 \times 10^{345},\ u^{66} - 3u^{65} + \cdots + 1022u - 2621 \rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 0.000112311u^{65} - 0.000346443u^{64} + \cdots - 0.270457u + 3.50774 \\ -0.0000360602u^{65} + 0.000111177u^{64} + \cdots + 0.748848u + 0.960593 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0000377394u^{65} + 0.000109948u^{64} + \cdots - 0.553697u - 3.17735 \\ 0.0000688159u^{65} - 0.000214201u^{64} + \cdots - 1.70637u - 0.657455 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0000148168u^{65} - 0.0000484765u^{64} + \cdots + 10.6401u + 0.738371 \\ 0.0000284980u^{65} - 0.0000667785u^{64} + \cdots + 3.25127u - 0.315788 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.0000381472u^{65} - 0.000101304u^{64} + \cdots + 13.9343u + 0.412030 \\ 0.0000323377u^{65} - 0.0000782973u^{64} + \cdots + 3.20767u - 0.360774 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0000305409u^{65} - 0.000101770u^{64} + \cdots - 2.35564u - 3.84338 \\ 0.0000751505u^{65} - 0.000234189u^{64} + \cdots - 1.89236u - 0.639428 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.000151268u^{65} - 0.000479153u^{64} + \cdots - 2.21265u + 0.437691 \\ 0.0000458801u^{65} - 0.000147106u^{64} + \cdots - 1.73849u + 0.898946 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.000249270u^{65} - 0.000703271u^{64} + \cdots - 2.14183u - 0.415613 \\ 0.0000538303u^{65} - 0.000153736u^{64} + \cdots - 0.578342u - 0.793468 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0000305409u^{65} - 0.000101770u^{64} + \cdots - 2.35564u - 3.84338 \\ 0.0000682803u^{65} - 0.000211719u^{64} + \cdots - 1.80195u - 0.666025 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.000148371u^{65} + 0.000457620u^{64} + \cdots + 1.01930u - 2.54715 \\ -0.0000173746u^{65} + 0.0000555578u^{64} + \cdots + 0.940765u - 1.04993 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.000277598u^{65} + 0.000900711u^{64} + \cdots + 12.6909u + 2.52964$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{66} - 4u^{65} + \cdots + 251u + 131$
c_2, c_5	$u^{66} + 2u^{65} + \cdots - 21u + 1$
c_3	$u^{66} - 3u^{65} + \cdots + 1022u - 2621$
c_4, c_{11}	$u^{66} + 5u^{65} + \cdots - 402u - 171$
c_6	$u^{66} - 2u^{65} + \cdots - 40871u - 2788$
c_7, c_{10}	$u^{66} + 6u^{65} + \cdots + 224u + 16$
c_8	$u^{66} + 47u^{64} + \cdots + 18353u - 20690$
c_9	$u^{66} - u^{65} + \cdots + 28988118u - 18025751$
c_{12}	$u^{66} - 3u^{65} + \cdots + 418122130u - 132292613$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{66} - 94y^{65} + \cdots - 1810017y + 17161$
c_2, c_5	$y^{66} - 48y^{65} + \cdots - 193y + 1$
c_3	$y^{66} + 83y^{65} + \cdots + 198203936y + 6869641$
c_4, c_{11}	$y^{66} - 29y^{65} + \cdots - 842526y + 29241$
c_6	$y^{66} + 20y^{65} + \cdots - 290997577y + 7772944$
c_7, c_{10}	$y^{66} + 46y^{65} + \cdots + 58848y^2 + 256$
c_8	$y^{66} + 94y^{65} + \cdots - 15224156589y + 428076100$
c_9	$y^{66} + 69y^{65} + \cdots + 2987872480868112y + 324927699114001$
c_{12}	$y^{66} + 89y^{65} + \cdots + 205846697467622796y + 17501335454367769$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.550266 + 0.896602I$ $a = -0.664287 - 1.148930I$ $b = -1.45948 - 0.16916I$	$-3.94389 - 6.56961I$	0
$u = 0.550266 - 0.896602I$ $a = -0.664287 + 1.148930I$ $b = -1.45948 + 0.16916I$	$-3.94389 + 6.56961I$	0
$u = -0.543655 + 0.904183I$ $a = -0.968879 - 0.052917I$ $b = -1.049230 - 0.220101I$	$-3.67929 + 0.01280I$	0
$u = -0.543655 - 0.904183I$ $a = -0.968879 + 0.052917I$ $b = -1.049230 + 0.220101I$	$-3.67929 - 0.01280I$	0
$u = 0.727225 + 0.435479I$ $a = 1.92650 - 1.46275I$ $b = 0.0406553 + 0.0835342I$	$1.88021 + 5.73599I$	$12.0656 - 12.6009I$
$u = 0.727225 - 0.435479I$ $a = 1.92650 + 1.46275I$ $b = 0.0406553 - 0.0835342I$	$1.88021 - 5.73599I$	$12.0656 + 12.6009I$
$u = -0.827890 + 0.059202I$ $a = 0.05599 - 1.88565I$ $b = 0.451189 + 1.104720I$	$3.42513 - 3.10241I$	$9.91560 + 5.14976I$
$u = -0.827890 - 0.059202I$ $a = 0.05599 + 1.88565I$ $b = 0.451189 - 1.104720I$	$3.42513 + 3.10241I$	$9.91560 - 5.14976I$
$u = -0.664488 + 0.463174I$ $a = 0.27357 - 1.57982I$ $b = 1.178760 + 0.161389I$	$-5.21721 + 2.27069I$	$1.36837 + 2.87034I$
$u = -0.664488 - 0.463174I$ $a = 0.27357 + 1.57982I$ $b = 1.178760 - 0.161389I$	$-5.21721 - 2.27069I$	$1.36837 - 2.87034I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.977420 + 0.705417I$ $a = -0.661293 - 1.175570I$ $b = -0.332722 + 1.184590I$	$3.03137 + 3.75606I$	0
$u = 0.977420 - 0.705417I$ $a = -0.661293 + 1.175570I$ $b = -0.332722 - 1.184590I$	$3.03137 - 3.75606I$	0
$u = -0.786749 + 0.925118I$ $a = -0.453089 + 0.514372I$ $b = -1.38895 + 0.39471I$	$-1.16081 + 2.14752I$	0
$u = -0.786749 - 0.925118I$ $a = -0.453089 - 0.514372I$ $b = -1.38895 - 0.39471I$	$-1.16081 - 2.14752I$	0
$u = -0.047405 + 1.254290I$ $a = -0.190093 - 0.333212I$ $b = -0.512278 + 0.035499I$	$-2.79710 + 1.27551I$	0
$u = -0.047405 - 1.254290I$ $a = -0.190093 + 0.333212I$ $b = -0.512278 - 0.035499I$	$-2.79710 - 1.27551I$	0
$u = -0.731486$ $a = 3.23812$ $b = 0.0576281$	5.84339	27.4510
$u = -0.031783 + 1.279140I$ $a = 0.215329 + 0.518435I$ $b = -0.615807 - 0.121803I$	$-7.92413 - 3.65685I$	0
$u = -0.031783 - 1.279140I$ $a = 0.215329 - 0.518435I$ $b = -0.615807 + 0.121803I$	$-7.92413 + 3.65685I$	0
$u = 1.239970 + 0.427685I$ $a = 0.320121 + 0.726029I$ $b = 1.300250 - 0.297303I$	$-0.04669 + 2.02198I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.239970 - 0.427685I$ $a = 0.320121 - 0.726029I$ $b = 1.300250 + 0.297303I$	$-0.04669 - 2.02198I$	0
$u = -0.615400 + 0.298327I$ $a = -0.804927 - 0.243840I$ $b = -0.077417 - 0.366976I$	$-2.56683 - 1.80846I$	$4.39793 + 4.09734I$
$u = -0.615400 - 0.298327I$ $a = -0.804927 + 0.243840I$ $b = -0.077417 + 0.366976I$	$-2.56683 + 1.80846I$	$4.39793 - 4.09734I$
$u = -0.231289 + 0.589186I$ $a = -0.781525 - 0.000516I$ $b = -0.973316 + 0.353834I$	$-1.68768 + 1.21202I$	$-0.72929 - 4.22771I$
$u = -0.231289 - 0.589186I$ $a = -0.781525 + 0.000516I$ $b = -0.973316 - 0.353834I$	$-1.68768 - 1.21202I$	$-0.72929 + 4.22771I$
$u = 0.353427 + 0.445086I$ $a = -0.479282 - 0.103589I$ $b = 0.297714 - 0.781830I$	$0.61831 - 2.78529I$	$6.08241 + 0.51566I$
$u = 0.353427 - 0.445086I$ $a = -0.479282 + 0.103589I$ $b = 0.297714 + 0.781830I$	$0.61831 + 2.78529I$	$6.08241 - 0.51566I$
$u = 0.229774 + 0.456770I$ $a = -0.432205 - 0.068370I$ $b = 0.560078 + 0.763611I$	$2.23371 - 0.09039I$	$7.37287 - 0.87265I$
$u = 0.229774 - 0.456770I$ $a = -0.432205 + 0.068370I$ $b = 0.560078 - 0.763611I$	$2.23371 + 0.09039I$	$7.37287 + 0.87265I$
$u = -0.20016 + 1.57518I$ $a = -1.81945 + 0.48506I$ $b = -1.258840 + 0.005810I$	$-10.50220 + 3.38126I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.20016-1.57518I$ $a=-1.81945-0.48506I$ $b=-1.258840-0.005810I$	$-10.50220-3.38126I$	0
$u=\ \ 0.377212$ $a=-0.878279$ $b=\ \ 0.221691$	0.673150	14.9230
$u=-0.253035+0.177235I$ $a=\ \ 2.70886+1.05385I$ $b=\ \ 1.139750-0.573699I$	$-1.86269+7.84926I$	$0.62349-4.16114I$
$u=-0.253035-0.177235I$ $a=\ \ 2.70886-1.05385I$ $b=\ \ 1.139750+0.573699I$	$-1.86269-7.84926I$	$0.62349+4.16114I$
$u=\ \ 0.03949+1.70848I$ $a=\ \ 1.64394+0.12321I$ $b=\ \ 1.60468-0.02089I$	$-12.24090-0.50529I$	0
$u=\ \ 0.03949-1.70848I$ $a=\ \ 1.64394-0.12321I$ $b=\ \ 1.60468+0.02089I$	$-12.24090+0.50529I$	0
$u=-1.51199+0.87275I$ $a=\ \ 0.624904-0.563500I$ $b=\ \ 1.359320+0.228726I$	$-3.11785-7.52482I$	0
$u=-1.51199-0.87275I$ $a=\ \ 0.624904+0.563500I$ $b=\ \ 1.359320-0.228726I$	$-3.11785+7.52482I$	0
$u=\ \ 0.189603+0.163078I$ $a=\ \ 4.45429+2.45755I$ $b=\ \ 0.939537-0.404470I$	$-4.72032+4.23068I$	$5.16490-8.44942I$
$u=\ \ 0.189603-0.163078I$ $a=\ \ 4.45429-2.45755I$ $b=\ \ 0.939537+0.404470I$	$-4.72032-4.23068I$	$5.16490+8.44942I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.029495+0.220286I$ $a=\ \ 2.62996-1.57110I$ $b=\ \ 1.051930+0.602659I$	$0.69632-5.10005I$	$4.21908+8.93882I$
$u=-0.029495-0.220286I$ $a=\ \ 2.62996+1.57110I$ $b=\ \ 1.051930-0.602659I$	$0.69632+5.10005I$	$4.21908-8.93882I$
$u=\ \ 0.14707+1.79220I$ $a=-0.0047642+0.0811756I$ $b=-0.384296-1.119010I$	$-9.51126-3.39870I$	0
$u=\ \ 0.14707-1.79220I$ $a=-0.0047642-0.0811756I$ $b=-0.384296+1.119010I$	$-9.51126+3.39870I$	0
$u=\ \ 0.69156+1.72392I$ $a=-0.740498+0.170634I$ $b=-0.655492+0.152399I$	$-4.48507+0.34747I$	0
$u=\ \ 0.69156-1.72392I$ $a=-0.740498-0.170634I$ $b=-0.655492-0.152399I$	$-4.48507-0.34747I$	0
$u=\ \ 0.11604+1.94557I$ $a=-0.0250709-0.0332917I$ $b=-0.08603-1.42479I$	$-7.96763+8.70759I$	0
$u=\ \ 0.11604-1.94557I$ $a=-0.0250709+0.0332917I$ $b=-0.08603+1.42479I$	$-7.96763-8.70759I$	0
$u=-0.61083+1.86793I$ $a=-1.026190+0.617276I$ $b=-1.38484-0.79367I$	$-12.39080-3.74278I$	0
$u=-0.61083-1.86793I$ $a=-1.026190-0.617276I$ $b=-1.38484+0.79367I$	$-12.39080+3.74278I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.20977+1.96700I$ $a=-0.0368901-0.0037967I$ $b=-0.33302+1.46253I$	$-4.04829-2.21767I$	0
$u=-0.20977-1.96700I$ $a=-0.0368901+0.0037967I$ $b=-0.33302-1.46253I$	$-4.04829+2.21767I$	0
$u=0.40823+1.96292I$ $a=-1.43456-0.22542I$ $b=-1.213000-0.036513I$	$-5.28293-1.49985I$	0
$u=0.40823-1.96292I$ $a=-1.43456+0.22542I$ $b=-1.213000+0.036513I$	$-5.28293+1.49985I$	0
$u=0.32373+2.02205I$ $a=1.154040+0.330512I$ $b=1.70054-0.47367I$	$-13.92610-1.38296I$	0
$u=0.32373-2.02205I$ $a=1.154040-0.330512I$ $b=1.70054+0.47367I$	$-13.92610+1.38296I$	0
$u=-0.39994+2.02628I$ $a=1.205390-0.344773I$ $b=1.54531+0.35640I$	$-10.89730-3.88708I$	0
$u=-0.39994-2.02628I$ $a=1.205390+0.344773I$ $b=1.54531-0.35640I$	$-10.89730+3.88708I$	0
$u=0.56302+2.00209I$ $a=-1.076820-0.499150I$ $b=-1.48301+0.72273I$	$-7.94229+9.99315I$	0
$u=0.56302-2.00209I$ $a=-1.076820+0.499150I$ $b=-1.48301-0.72273I$	$-7.94229-9.99315I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.49267+2.02523I$ $a=-1.155480+0.473455I$ $b=-1.47378-0.66173I$	$-12.4141-15.9549I$	0
$u=-0.49267-2.02523I$ $a=-1.155480-0.473455I$ $b=-1.47378+0.66173I$	$-12.4141+15.9549I$	0
$u=0.40983+2.17347I$ $a=1.190030+0.336694I$ $b=1.46125-0.40417I$	$-15.3485+8.5623I$	0
$u=0.40983-2.17347I$ $a=1.190030-0.336694I$ $b=1.46125+0.40417I$	$-15.3485-8.5623I$	0
$u=2.16701+0.96801I$ $a=-1.000200-0.188283I$ $b=-1.089120-0.158880I$	$-4.90781-0.48946I$	0
$u=2.16701-0.96801I$ $a=-1.000200+0.188283I$ $b=-1.089120+0.158880I$	$-4.90781+0.48946I$	0

II.

$\boldsymbol{I_2^u = \langle -5.16\times10^{14}u^{22}+4.97\times10^{15}u^{21}+\cdots+6.70\times10^{15}b-5.25\times10^{15},\ -1.04\times10^{16}u^{22}+4.71\times10^{16}u^{21}+\cdots+6.70\times10^{15}a+1.87\times10^{16},\ u^{23}-4u^{22}+\cdots-2u-1\rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix}0\\u\end{pmatrix}$$

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

$$a_6 = \begin{pmatrix}1.55903u^{22} - 7.02888u^{21} + \cdots - 5.76187u - 2.78926\\0.0770910u^{22} - 0.741730u^{21} + \cdots - 1.07988u + 0.784576\end{pmatrix}$$

$$a_2 = \begin{pmatrix}-0.725934u^{22} + 3.34952u^{21} + \cdots + 2.91597u + 1.97536\\0.407470u^{22} - 2.13118u^{21} + \cdots - 0.418965u - 1.02729\end{pmatrix}$$

$$a_9 = \begin{pmatrix}1.52368u^{22} - 6.77624u^{21} + \cdots - 4.93605u - 1.18246\\-0.844098u^{22} + 3.83422u^{21} + \cdots + 0.596351u + 1.60466\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}0.879843u^{22} - 3.70740u^{21} + \cdots - 4.17906u - 0.259328\\-0.535247u^{22} + 2.53641u^{21} + \cdots + 0.253205u + 1.11116\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-0.705943u^{22} + 3.10076u^{21} + \cdots + 2.66264u + 1.39386\\0.311346u^{22} - 1.61437u^{21} + \cdots - 0.101348u - 0.858489\end{pmatrix}$$

$$a_5 = \begin{pmatrix}0.765842u^{22} - 4.10351u^{21} + \cdots - 3.05258u + 0.346479\\-0.913552u^{22} + 4.44614u^{21} + \cdots + 1.46542u + 1.24958\end{pmatrix}$$

$$a_7 = \begin{pmatrix}1.60544u^{22} - 6.83027u^{21} + \cdots + 0.708634u - 4.90601\\1.09999u^{22} - 5.16613u^{21} + \cdots - 2.06690u - 0.748018\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}-0.705943u^{22} + 3.10076u^{21} + \cdots + 2.66264u + 1.39386\\0.0199903u^{22} - 0.248765u^{21} + \cdots - 0.253327u - 0.581507\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-1.48194u^{22} + 6.28715u^{21} + \cdots + 4.68199u + 3.57384\\-1.14248u^{22} + 5.28279u^{21} + \cdots + 1.81382u + 1.01860\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= \frac{1767765260313609}{836994682049036}u^{22} - \frac{6469406606920041}{836994682049036}u^{21} + \cdots - \frac{4410901774827063}{836994682049036}u - \frac{238227547710287}{836994682049036}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 13u^{22} + \cdots + 579u - 101$
c_2	$u^{23} + 5u^{22} + \cdots + 5u + 1$
c_3	$u^{23} - 4u^{22} + \cdots - 2u - 1$
c_4	$u^{23} + 4u^{22} + \cdots - 2u - 1$
c_5	$u^{23} - 5u^{22} + \cdots + 5u - 1$
c_6	$u^{23} - u^{22} + \cdots - 4u - 1$
c_7	$u^{23} + 7u^{22} + \cdots + 24u + 4$
c_8	$u^{23} + u^{22} + \cdots - 4u - 1$
c_9	$u^{23} + 13u^{21} + \cdots - 4u + 1$
c_{10}	$u^{23} - 7u^{22} + \cdots + 24u - 4$
c_{11}	$u^{23} - 4u^{22} + \cdots - 2u + 1$
c_{12}	$u^{23} + 18u^{22} + \cdots - 7u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} - 21y^{22} + \cdots + 137079y - 10201$
c_2, c_5	$y^{23} - 11y^{22} + \cdots + 11y - 1$
c_3	$y^{23} + 4y^{22} + \cdots + 6y - 1$
c_4, c_{11}	$y^{23} - 12y^{22} + \cdots + 50y^2 - 1$
c_6	$y^{23} - 7y^{22} + \cdots - 24y - 1$
c_7, c_{10}	$y^{23} + 15y^{22} + \cdots + 64y - 16$
c_8	$y^{23} + 19y^{22} + \cdots + 12y - 1$
c_9	$y^{23} + 26y^{22} + \cdots + 6y - 1$
c_{12}	$y^{23} - 166y^{22} + \cdots + 14y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.874412+0.450439I$ $a=\ \ 0.49727-1.62551I$ $b=\ \ 0.197520+1.146350I$	$3.24769-4.37033I$	$10.0565+11.1753I$
$u=-0.874412-0.450439I$ $a=\ \ 0.49727+1.62551I$ $b=\ \ 0.197520-1.146350I$	$3.24769+4.37033I$	$10.0565-11.1753I$
$u=\ \ 0.862202+0.466629I$ $a=-0.52611-1.42655I$ $b=-0.627257+1.173710I$	$3.08238+2.29231I$	$4.36467+2.48869I$
$u=\ \ 0.862202-0.466629I$ $a=-0.52611+1.42655I$ $b=-0.627257-1.173710I$	$3.08238-2.29231I$	$4.36467-2.48869I$
$u=\ \ 0.822480+0.358939I$ $a=-0.155185-0.371353I$ $b=-1.155090+0.468700I$	$-0.90973+8.53479I$	$6.72404-8.38769I$
$u=\ \ 0.822480-0.358939I$ $a=-0.155185+0.371353I$ $b=-1.155090-0.468700I$	$-0.90973-8.53479I$	$6.72404+8.38769I$
$u=-0.701487+0.462033I$ $a=-2.44701-1.11361I$ $b=-0.597104+0.199459I$	$1.56421-5.38320I$	$0.163108-0.319571I$
$u=-0.701487-0.462033I$ $a=-2.44701+1.11361I$ $b=-0.597104-0.199459I$	$1.56421+5.38320I$	$0.163108+0.319571I$
$u=-0.712928+0.435312I$ $a=-0.037762-0.296324I$ $b=-1.144960+0.669161I$	$0.98056+4.23184I$	$7.06871-1.26450I$
$u=-0.712928-0.435312I$ $a=-0.037762+0.296324I$ $b=-1.144960-0.669161I$	$0.98056-4.23184I$	$7.06871+1.26450I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.082357 + 1.273310I$ $a = 0.430315 + 0.330387I$ $b = -0.557351 - 0.433936I$	$-7.43499 - 4.07830I$	$5.09056 + 7.35806I$
$u = 0.082357 - 1.273310I$ $a = 0.430315 - 0.330387I$ $b = -0.557351 + 0.433936I$	$-7.43499 + 4.07830I$	$5.09056 - 7.35806I$
$u = 0.720759$ $a = -3.39122$ $b = -0.506052$	5.56542	-2.19910
$u = 0.318509 + 0.449463I$ $a = 0.079165 + 0.812558I$ $b = 1.116300 + 0.343936I$	$-1.161340 - 0.595654I$	$5.98634 - 2.67183I$
$u = 0.318509 - 0.449463I$ $a = 0.079165 - 0.812558I$ $b = 1.116300 - 0.343936I$	$-1.161340 + 0.595654I$	$5.98634 + 2.67183I$
$u = -0.04437 + 1.45182I$ $a = 0.353212 + 0.027944I$ $b = 0.218100 + 0.647175I$	$-1.99194 + 0.94590I$	$10.18917 - 0.41452I$
$u = -0.04437 - 1.45182I$ $a = 0.353212 - 0.027944I$ $b = 0.218100 - 0.647175I$	$-1.99194 - 0.94590I$	$10.18917 + 0.41452I$
$u = -0.294434 + 0.243731I$ $a = 0.66187 - 2.79243I$ $b = 1.019620 - 0.151411I$	$-4.73096 + 3.15634I$	$4.23220 - 3.16834I$
$u = -0.294434 - 0.243731I$ $a = 0.66187 + 2.79243I$ $b = 1.019620 + 0.151411I$	$-4.73096 - 3.15634I$	$4.23220 + 3.16834I$
$u = -0.10789 + 1.73390I$ $a = -1.56075 + 0.22687I$ $b = -1.62758 - 0.14949I$	$-12.08590 + 1.15226I$	$3.47782 - 6.88892I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.10789-1.73390I$ $a=-1.56075-0.22687I$ $b=-1.62758+0.14949I$	$-12.08590-1.15226I$	$3.47782+6.88892I$
$u=2.28960+1.71638I$ $a=0.900594-0.162427I$ $b=0.910824-0.123102I$	$-4.72684+0.26589I$	0
$u=2.28960-1.71638I$ $a=0.900594+0.162427I$ $b=0.910824+0.123102I$	$-4.72684-0.26589I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{23}-13u^{22}+\cdots+579u-101)(u^{66}-4u^{65}+\cdots+251u+131)$
c_2	$(u^{23}+5u^{22}+\cdots+5u+1)(u^{66}+2u^{65}+\cdots-21u+1)$
c_3	$(u^{23}-4u^{22}+\cdots-2u-1)(u^{66}-3u^{65}+\cdots+1022u-2621)$
c_4	$(u^{23}+4u^{22}+\cdots-2u-1)(u^{66}+5u^{65}+\cdots-402u-171)$
c_5	$(u^{23}-5u^{22}+\cdots+5u-1)(u^{66}+2u^{65}+\cdots-21u+1)$
c_6	$(u^{23}-u^{22}+\cdots-4u-1)(u^{66}-2u^{65}+\cdots-40871u-2788)$
c_7	$(u^{23}+7u^{22}+\cdots+24u+4)(u^{66}+6u^{65}+\cdots+224u+16)$
c_8	$(u^{23}+u^{22}+\cdots-4u-1)(u^{66}+47u^{64}+\cdots+18353u-20690)$
c_9	$(u^{23}+13u^{21}+\cdots-4u+1)$ $\cdot(u^{66}-u^{65}+\cdots+28988118u-18025751)$
c_{10}	$(u^{23}-7u^{22}+\cdots+24u-4)(u^{66}+6u^{65}+\cdots+224u+16)$
c_{11}	$(u^{23}-4u^{22}+\cdots-2u+1)(u^{66}+5u^{65}+\cdots-402u-171)$
c_{12}	$(u^{23}+18u^{22}+\cdots-7u^2+1)$ $\cdot(u^{66}-3u^{65}+\cdots+418122130u-132292613)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{23}-21y^{22}+\cdots+137079y-10201)$ $\cdot(y^{66}-94y^{65}+\cdots-1810017y+17161)$
c_2, c_5	$(y^{23}-11y^{22}+\cdots+11y-1)(y^{66}-48y^{65}+\cdots-193y+1)$
c_3	$(y^{23}+4y^{22}+\cdots+6y-1)$ $\cdot(y^{66}+83y^{65}+\cdots+198203936y+6869641)$
c_4, c_{11}	$(y^{23}-12y^{22}+\cdots+50y^2-1)(y^{66}-29y^{65}+\cdots-842526y+29241)$
c_6	$(y^{23}-7y^{22}+\cdots-24y-1)$ $\cdot(y^{66}+20y^{65}+\cdots-290997577y+7772944)$
c_7, c_{10}	$(y^{23}+15y^{22}+\cdots+64y-16)(y^{66}+46y^{65}+\cdots+58848y^2+256)$
c_8	$(y^{23}+19y^{22}+\cdots+12y-1)$ $\cdot(y^{66}+94y^{65}+\cdots-15224156589y+428076100)$
c_9	$(y^{23}+26y^{22}+\cdots+6y-1)$ $\cdot(y^{66}+69y^{65}+\cdots+2987872480868112y+324927699114001)$
c_{12}	$(y^{23}-166y^{22}+\cdots+14y-1)$ $\cdot(y^{66}+89y^{65}+\cdots+205846697467622796y+17501335454367769)$