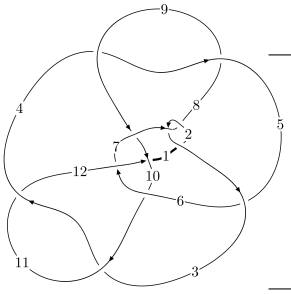
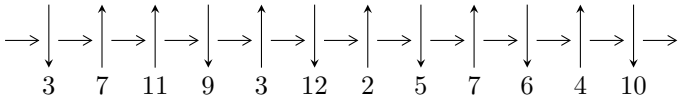
$12n_{0633}$ $(K12n_{0633})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.85653 \times 10^{96} u^{67} + 6.21801 \times 10^{96} u^{66} + \cdots + 1.94852 \times 10^{96} b - 2.56391 \times 10^{97}, \\ & - 1.98079 \times 10^{97} u^{67} + 7.40641 \times 10^{96} u^{66} + \cdots + 3.89704 \times 10^{96} a - 1.25871 \times 10^{98}, \\ & u^{68} - 21 u^{66} + \cdots - 22 u + 4 \rangle \\ I_2^u = \langle & 34763 u^{19} - 7407 u^{18} + \cdots + 3686 b - 174428,\ -171203 u^{19} + 58379 u^{18} + \cdots + 7372 a + 755094, \\ & u^{20} - u^{19} + \cdots - 2 u + 4 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 88 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. $\boldsymbol{I_1^u = \langle -6.86 \times 10^{96} u^{67} + 6.22 \times 10^{96} u^{66} + \cdots + 1.95 \times 10^{96} b - 2.56 \times 10^{97},\ -1.98 \times 10^{97} u^{67} + 7.41 \times 10^{96} u^{66} + \cdots + 3.90 \times 10^{96} a - 1.26 \times 10^{98},\ u^{68} - 21 u^{66} + \cdots - 22u + 4 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 5.08280u^{67} - 1.90052u^{66} + \cdots - 261.858u + 32.2991 \\ 3.51883u^{67} - 3.19114u^{66} + \cdots - 67.4259u + 13.1583 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.913294u^{67} + 1.61910u^{66} + \cdots - 132.289u + 11.5387 \\ 6.79407u^{67} - 5.84784u^{66} + \cdots - 161.535u + 27.2367 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 16.8822u^{67} - 10.5665u^{66} + \cdots - 538.941u + 75.0706 \\ -9.25794u^{67} + 6.53626u^{66} + \cdots + 329.727u - 48.4229 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.71831u^{67} - 0.0689445u^{66} + \cdots - 115.435u + 11.9324 \\ 6.88332u^{67} - 5.02272u^{66} + \cdots - 213.849u + 33.5249 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 25.1621u^{67} - 18.4497u^{66} + \cdots - 888.032u + 134.487 \\ -17.8873u^{67} + 13.8599u^{66} + \cdots + 648.982u - 96.7041 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 19.3375u^{67} - 11.7232u^{66} + \cdots - 658.103u + 91.1915 \\ -11.7133u^{67} + 7.69295u^{66} + \cdots + 448.888u - 64.5438 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -4.85415u^{67} + 4.02937u^{66} + \cdots + 67.1858u - 6.11337 \\ 28.8964u^{67} - 27.6860u^{66} + \cdots - 747.269u + 114.575 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 8.95388u^{67} - 5.32862u^{66} + \cdots - 419.793u + 66.1754 \\ 22.8262u^{67} - 22.4977u^{66} + \cdots - 524.537u + 80.1631 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 292.431u^{67} - 245.607u^{66} + \cdots - 9342.95u + 1389.56$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{68}+74u^{67}+\cdots+5731546u+418609$
c_2, c_7	$u^{68}+37u^{66}+\cdots-3274u+647$
c_3, c_{11}	$u^{68}-21u^{66}+\cdots+22u+4$
c_4, c_8	$u^{68}-u^{67}+\cdots-11u+1$
c_5	$u^{68}+15u^{66}+\cdots+135093u+1093$
c_6	$u^{68}+u^{67}+\cdots-16u^2+1$
c_9	$u^{68}+5u^{67}+\cdots+52344u+5441$
c_{10}	$u^{68}+2u^{67}+\cdots-82u+23$
c_{12}	$u^{68}-10u^{67}+\cdots-74106u+4643$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{68} - 138y^{67} + \cdots + 15388310151698y + 175233494881$
c_2, c_7	$y^{68} + 74y^{67} + \cdots + 5731546y + 418609$
c_3, c_{11}	$y^{68} - 42y^{67} + \cdots - 428y + 16$
c_4, c_8	$y^{68} + 9y^{67} + \cdots - 13y + 1$
c_5	$y^{68} + 30y^{67} + \cdots - 20226072467y + 1194649$
c_6	$y^{68} - 3y^{67} + \cdots - 32y + 1$
c_9	$y^{68} + 97y^{67} + \cdots + 2711378272y + 29604481$
c_{10}	$y^{68} + 70y^{66} + \cdots + 6570y + 529$
c_{12}	$y^{68} - 38y^{67} + \cdots - 545000606y + 21557449$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.949060 + 0.277585I$ $a = 0.674087 + 0.799939I$ $b = -1.082240 - 0.511503I$	$1.62540 + 4.62273I$	0
$u = 0.949060 - 0.277585I$ $a = 0.674087 - 0.799939I$ $b = -1.082240 + 0.511503I$	$1.62540 - 4.62273I$	0
$u = 0.477554 + 0.863068I$ $a = 0.299238 - 0.445376I$ $b = 0.312922 + 0.155500I$	$-0.168580 - 1.402730I$	0
$u = 0.477554 - 0.863068I$ $a = 0.299238 + 0.445376I$ $b = 0.312922 - 0.155500I$	$-0.168580 + 1.402730I$	0
$u = -0.976594 + 0.352303I$ $a = -0.09839 + 2.45816I$ $b = -0.563810 - 0.683484I$	$1.95040 - 4.90409I$	0
$u = -0.976594 - 0.352303I$ $a = -0.09839 - 2.45816I$ $b = -0.563810 + 0.683484I$	$1.95040 + 4.90409I$	0
$u = -0.987338 + 0.336791I$ $a = 1.31787 - 0.70232I$ $b = -1.66989 + 1.37122I$	$-6.65007 + 1.79663I$	0
$u = -0.987338 - 0.336791I$ $a = 1.31787 + 0.70232I$ $b = -1.66989 - 1.37122I$	$-6.65007 - 1.79663I$	0
$u = 0.036453 + 0.949205I$ $a = -0.117308 + 0.268241I$ $b = -0.933587 - 0.421593I$	$-2.20089 - 5.01038I$	0
$u = 0.036453 - 0.949205I$ $a = -0.117308 - 0.268241I$ $b = -0.933587 + 0.421593I$	$-2.20089 + 5.01038I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.562459+0.893363I$ $a=-0.325180-0.090948I$ $b=-0.344858-0.579627I$	$1.89174-1.13471I$	0
$u=-0.562459-0.893363I$ $a=-0.325180+0.090948I$ $b=-0.344858+0.579627I$	$1.89174+1.13471I$	0
$u=-1.033320+0.240118I$ $a=-0.62100-2.16741I$ $b=0.694803+0.385277I$	$0.70109-1.37028I$	0
$u=-1.033320-0.240118I$ $a=-0.62100+2.16741I$ $b=0.694803-0.385277I$	$0.70109+1.37028I$	0
$u=0.900961+0.246507I$ $a=-0.17734+1.80879I$ $b=0.633695-1.091540I$	$-0.63633+2.50561I$	0
$u=0.900961-0.246507I$ $a=-0.17734-1.80879I$ $b=0.633695+1.091540I$	$-0.63633-2.50561I$	0
$u=0.769050+0.512192I$ $a=-0.458901+1.078890I$ $b=1.386090-0.201350I$	$-3.53141+2.10002I$	0
$u=0.769050-0.512192I$ $a=-0.458901-1.078890I$ $b=1.386090+0.201350I$	$-3.53141-2.10002I$	0
$u=0.992421+0.427912I$ $a=-1.222460-0.492212I$ $b=-1.026620+0.399550I$	$-7.28832+7.29217I$	0
$u=0.992421-0.427912I$ $a=-1.222460+0.492212I$ $b=-1.026620-0.399550I$	$-7.28832-7.29217I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.024000 + 0.488219I$ $a = 0.924713 + 0.917552I$ $b = 1.222870 - 0.449426I$	$-6.66867 + 0.53139I$	0
$u = 1.024000 - 0.488219I$ $a = 0.924713 - 0.917552I$ $b = 1.222870 + 0.449426I$	$-6.66867 - 0.53139I$	0
$u = -0.851677 + 0.071654I$ $a = 1.98456 - 1.14177I$ $b = 1.072350 - 0.022127I$	$-0.468926 - 0.123890I$	$53.5469 + 43.7479I$
$u = -0.851677 - 0.071654I$ $a = 1.98456 + 1.14177I$ $b = 1.072350 + 0.022127I$	$-0.468926 + 0.123890I$	$53.5469 - 43.7479I$
$u = -1.101920 + 0.332895I$ $a = -1.56004 + 1.06712I$ $b = 1.63485 - 1.88936I$	$-5.37170 - 6.15935I$	0
$u = -1.101920 - 0.332895I$ $a = -1.56004 - 1.06712I$ $b = 1.63485 + 1.88936I$	$-5.37170 + 6.15935I$	0
$u = -0.206713 + 1.141710I$ $a = 0.0966368 - 0.0568163I$ $b = 1.10834 - 0.89772I$	$-9.8473 + 10.2493I$	0
$u = -0.206713 - 1.141710I$ $a = 0.0966368 + 0.0568163I$ $b = 1.10834 + 0.89772I$	$-9.8473 - 10.2493I$	0
$u = -1.036630 + 0.527403I$ $a = -0.563736 + 0.430837I$ $b = -0.265018 - 0.549706I$	$1.87759 - 0.90886I$	0
$u = -1.036630 - 0.527403I$ $a = -0.563736 - 0.430837I$ $b = -0.265018 + 0.549706I$	$1.87759 + 0.90886I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.130330+0.383792I$ $a=-0.58473+1.43790I$ $b=-0.314371-0.692494I$	$3.41676-1.44246I$	0
$u=-1.130330-0.383792I$ $a=-0.58473-1.43790I$ $b=-0.314371+0.692494I$	$3.41676+1.44246I$	0
$u=-0.163217+1.186590I$ $a=-0.0340048+0.1210010I$ $b=-1.047260+0.754337I$	$-10.81970+1.95946I$	0
$u=-0.163217-1.186590I$ $a=-0.0340048-0.1210010I$ $b=-1.047260-0.754337I$	$-10.81970-1.95946I$	0
$u=1.166730+0.482446I$ $a=0.21340+1.77817I$ $b=0.696368-1.218600I$	$1.62803+6.96696I$	0
$u=1.166730-0.482446I$ $a=0.21340-1.77817I$ $b=0.696368+1.218600I$	$1.62803-6.96696I$	0
$u=-0.723291+0.103919I$ $a=0.19228+4.46686I$ $b=-0.53650-2.36375I$	$-7.96551-4.21106I$	$-10.6805+9.7958I$
$u=-0.723291-0.103919I$ $a=0.19228-4.46686I$ $b=-0.53650+2.36375I$	$-7.96551+4.21106I$	$-10.6805-9.7958I$
$u=1.161530+0.541241I$ $a=0.38524+1.44006I$ $b=0.432750-0.788611I$	$2.24420+6.51019I$	0
$u=1.161530-0.541241I$ $a=0.38524-1.44006I$ $b=0.432750+0.788611I$	$2.24420-6.51019I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.640613+0.315137I$ $a=-0.998359-0.244645I$ $b=-0.825755+0.417032I$	$0.90027+1.87459I$	$3.46073-1.75743I$
$u=-0.640613-0.315137I$ $a=-0.998359+0.244645I$ $b=-0.825755-0.417032I$	$0.90027-1.87459I$	$3.46073+1.75743I$
$u=\ 0.148278+0.694455I$ $a=-0.446602-0.061714I$ $b=\ 0.709628+0.749968I$	$-1.31557-2.50850I$	$-5.13435+3.12741I$
$u=\ 0.148278-0.694455I$ $a=-0.446602+0.061714I$ $b=\ 0.709628-0.749968I$	$-1.31557+2.50850I$	$-5.13435-3.12741I$
$u=\ 1.272720+0.363259I$ $a=\ 0.01011-1.58994I$ $b=-1.06776+1.36859I$	$6.88375+4.97359I$	0
$u=\ 1.272720-0.363259I$ $a=\ 0.01011+1.58994I$ $b=-1.06776-1.36859I$	$6.88375-4.97359I$	0
$u=\ 1.261530+0.506772I$ $a=\ 0.06337-1.58271I$ $b=-0.995510+0.749214I$	$1.52447+10.15860I$	0
$u=\ 1.261530-0.506772I$ $a=\ 0.06337+1.58271I$ $b=-0.995510-0.749214I$	$1.52447-10.15860I$	0
$u=-1.380680+0.270616I$ $a=-0.015714-0.343875I$ $b=-0.115547+0.236900I$	$2.41433-0.14658I$	0
$u=-1.380680-0.270616I$ $a=-0.015714+0.343875I$ $b=-0.115547-0.236900I$	$2.41433+0.14658I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.578179$ $a = -1.35754$ $b = \ 1.34424$	-1.69517	-8.62180
$u = \ 0.457759 + 0.331098I$ $a = -0.95050 - 3.45445I$ $b = -0.328997 - 0.646374I$	$-8.83729 - 3.75680I$	$-4.87595 + 0.45083I$
$u = \ 0.457759 - 0.331098I$ $a = -0.95050 + 3.45445I$ $b = -0.328997 + 0.646374I$	$-8.83729 + 3.75680I$	$-4.87595 - 0.45083I$
$u = -1.29321 + 0.62592I$ $a = \ 0.14369 - 1.63479I$ $b = \ 1.34354 + 1.11783I$	$-6.4415 - 16.4621I$	0
$u = -1.29321 - 0.62592I$ $a = \ 0.14369 + 1.63479I$ $b = \ 1.34354 - 1.11783I$	$-6.4415 + 16.4621I$	0
$u = -1.33567 + 0.55610I$ $a = \ 0.258977 - 1.031680I$ $b = \ 0.70692 + 1.26195I$	$5.22604 - 5.31158I$	0
$u = -1.33567 - 0.55610I$ $a = \ 0.258977 + 1.031680I$ $b = \ 0.70692 - 1.26195I$	$5.22604 + 5.31158I$	0
$u = -1.30896 + 0.62516I$ $a = -0.04918 + 1.49859I$ $b = -1.32742 - 1.09391I$	$-7.24233 - 8.26321I$	0
$u = -1.30896 - 0.62516I$ $a = -0.04918 - 1.49859I$ $b = -1.32742 + 1.09391I$	$-7.24233 + 8.26321I$	0
$u = \ 0.298475 + 0.454106I$ $a = \ 2.15097 + 2.17240I$ $b = \ 0.562565 + 0.849058I$	$-8.57658 + 3.47140I$	$-3.76489 - 3.57042I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.298475 - 0.454106I$ $a = 2.15097 - 2.17240I$ $b = 0.562565 - 0.849058I$	$-8.57658 - 3.47140I$	$-3.76489 + 3.57042I$
$u = 0.217791 + 0.460271I$ $a = -0.420843 - 1.134500I$ $b = -0.083559 + 0.511003I$	$0.04096 - 1.67981I$	$0.32843 + 3.37053I$
$u = 0.217791 - 0.460271I$ $a = -0.420843 + 1.134500I$ $b = -0.083559 - 0.511003I$	$0.04096 + 1.67981I$	$0.32843 - 3.37053I$
$u = 1.45066 + 0.83027I$ $a = 0.117799 - 0.418638I$ $b = -0.567734 - 0.021803I$	$-5.46714 + 5.19884I$	0
$u = 1.45066 - 0.83027I$ $a = 0.117799 + 0.418638I$ $b = -0.567734 + 0.021803I$	$-5.46714 - 5.19884I$	0
$u = 0.326449$ $a = -1.90214$ $b = 1.12096$	-1.71156	-7.01780
$u = 1.69533 + 0.19034I$ $a = -0.308818 - 0.486749I$ $b = 0.346134 + 0.908029I$	$-3.50096 - 4.59075I$	0
$u = 1.69533 - 0.19034I$ $a = -0.308818 + 0.486749I$ $b = 0.346134 - 0.908029I$	$-3.50096 + 4.59075I$	0

II. $I_2^u = \langle 34763u^{19} - 7407u^{18} + \cdots + 3686b - 174428,\ -1.71 \times 10^5 u^{19} + 5.84 \times 10^4 u^{18} + \cdots + 7372a + 7.55 \times 10^5,\ u^{20} - u^{19} + \cdots - 2u + 4\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 23.2234u^{19} - 7.91902u^{18} + \cdots - 102.257u - 102.427 \\ -9.43109u^{19} + 2.00950u^{18} + \cdots + 41.0285u + 47.3218 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 18.3436u^{19} - 4.83356u^{18} + \cdots - 81.0007u - 88.5315 \\ -6.01546u^{19} - 0.634021u^{18} + \cdots + 25.0979u + 40.1443 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{3}{4}u^{19} + \frac{1}{4}u^{18} + \cdots + \frac{9}{4}u - \frac{5}{2} \\ -9.73169u^{19} + 10.5271u^{18} + \cdots + 59.5814u - 2.22355 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 14.5142u^{19} - 3.78445u^{18} + \cdots - 62.8534u - 70.8961 \\ -0.721921u^{19} - 2.12507u^{18} + \cdots + 1.62480u + 15.7906 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -8.87765u^{19} - 2.11503u^{18} + \cdots + 22.6549u + 67.2878 \\ 8.77998u^{19} - 1.86300u^{18} + \cdots - 32.5890u - 45.9289 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -4.68353u^{19} + 7.42254u^{18} + \cdots + 41.7676u - 9.68177 \\ -4.29816u^{19} + 3.35458u^{18} + \cdots + 20.0638u + 4.95822 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -6.01858u^{19} + 0.685431u^{18} + \cdots + 21.5563u + 38.1120 \\ 14.2770u^{19} - 24.2748u^{18} + \cdots - 113.824u + 57.3445 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -22.6367u^{19} + 3.63077u^{18} + \cdots + 84.8923u + 126.802 \\ 18.5670u^{19} - 22.7526u^{18} + \cdots - 123.258u + 20.0412 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{67727}{1843}u^{19} + \frac{137752}{1843}u^{18} + \cdots + \frac{656532}{1843}u - \frac{448817}{1843}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 13u^{19} + \cdots - 10u + 1$
c_2	$u^{20} + u^{19} + \cdots - 4u + 1$
c_3	$u^{20} + u^{19} + \cdots + 2u + 4$
c_4	$u^{20} + 6u^{18} + \cdots - 7u + 1$
c_5	$u^{20} - 3u^{19} + \cdots - 83u + 19$
c_6	$u^{20} - 2u^{19} + \cdots - 4u + 1$
c_7	$u^{20} - u^{19} + \cdots + 4u + 1$
c_8	$u^{20} + 6u^{18} + \cdots + 7u + 1$
c_9	$u^{20} - 8u^{19} + \cdots + 10u + 1$
c_{10}	$u^{20} - u^{19} + \cdots + u^2 + 1$
c_{11}	$u^{20} - u^{19} + \cdots - 2u + 4$
c_{12}	$u^{20} - u^{19} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} - 31y^{19} + \cdots + 58y + 1$
c_2, c_7	$y^{20} + 13y^{19} + \cdots + 10y + 1$
c_3, c_{11}	$y^{20} - 15y^{19} + \cdots - 140y + 16$
c_4, c_8	$y^{20} + 12y^{19} + \cdots + 3y + 1$
c_5	$y^{20} - 3y^{19} + \cdots + 825y + 361$
c_6	$y^{20} - 4y^{19} + \cdots - 4y + 1$
c_9	$y^{20} + 8y^{19} + \cdots - 88y + 1$
c_{10}	$y^{20} + 11y^{19} + \cdots + 2y + 1$
c_{12}	$y^{20} - 7y^{19} + \cdots - 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.131002+1.113250I$ $a=\ \ 0.135762-0.247562I$ $b=-0.211337-0.712335I$	$1.33031-1.41660I$	$-0.12221+8.09754I$
$u=-0.131002-1.113250I$ $a=\ \ 0.135762+0.247562I$ $b=-0.211337+0.712335I$	$1.33031+1.41660I$	$-0.12221-8.09754I$
$u=-0.825439+0.292703I$ $a=-0.38792+1.50877I$ $b=\ \ 0.520453-0.239703I$	$1.37870-3.71317I$	$0.62059+2.55570I$
$u=-0.825439-0.292703I$ $a=-0.38792-1.50877I$ $b=\ \ 0.520453+0.239703I$	$1.37870+3.71317I$	$0.62059-2.55570I$
$u=-0.791371+0.025548I$ $a=-1.49350+0.66671I$ $b=-1.027350+0.007941I$	$-0.519322-0.028360I$	$-0.03473-12.86700I$
$u=-0.791371-0.025548I$ $a=-1.49350-0.66671I$ $b=-1.027350-0.007941I$	$-0.519322+0.028360I$	$-0.03473+12.86700I$
$u=\ \ 0.773025+0.011716I$ $a=-0.10430+4.15418I$ $b=\ \ 0.49721-1.78697I$	$-7.62230+3.92786I$	$4.72796+1.10442I$
$u=\ \ 0.773025-0.011716I$ $a=-0.10430-4.15418I$ $b=\ \ 0.49721+1.78697I$	$-7.62230-3.92786I$	$4.72796-1.10442I$
$u=\ \ 1.136810+0.495760I$ $a=\ \ 0.29177+1.81673I$ $b=\ \ 0.535350-0.990359I$	$2.47500+7.36889I$	$6.99032-11.23662I$
$u=\ \ 1.136810-0.495760I$ $a=\ \ 0.29177-1.81673I$ $b=\ \ 0.535350+0.990359I$	$2.47500-7.36889I$	$6.99032+11.23662I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.323852 + 0.618441I$ $a = -0.011337 - 0.743359I$ $b = 0.689251 + 0.623831I$	$0.00877 - 2.95298I$	$1.04164 + 6.04571I$
$u = 0.323852 - 0.618441I$ $a = -0.011337 + 0.743359I$ $b = 0.689251 - 0.623831I$	$0.00877 + 2.95298I$	$1.04164 - 6.04571I$
$u = -1.324440 + 0.377135I$ $a = 0.082854 - 1.273180I$ $b = 0.97990 + 1.07266I$	$6.29671 - 3.98961I$	$3.78793 + 0.83717I$
$u = -1.324440 - 0.377135I$ $a = 0.082854 + 1.273180I$ $b = 0.97990 - 1.07266I$	$6.29671 + 3.98961I$	$3.78793 - 0.83717I$
$u = 1.303070 + 0.485356I$ $a = -0.31452 - 1.41895I$ $b = -0.64491 + 1.58943I$	$5.64745 + 6.68901I$	$3.95560 - 7.72080I$
$u = 1.303070 - 0.485356I$ $a = -0.31452 + 1.41895I$ $b = -0.64491 - 1.58943I$	$5.64745 - 6.68901I$	$3.95560 + 7.72080I$
$u = 1.34758 + 0.43306I$ $a = 0.282070 + 0.271645I$ $b = -0.551118 - 0.834660I$	$-4.80101 + 4.75092I$	$1.34592 - 3.51891I$
$u = 1.34758 - 0.43306I$ $a = 0.282070 - 0.271645I$ $b = -0.551118 + 0.834660I$	$-4.80101 - 4.75092I$	$1.34592 + 3.51891I$
$u = -1.31208 + 0.53837I$ $a = -0.230879 + 0.508463I$ $b = -0.287446 - 0.374984I$	$2.38542 - 0.59111I$	$10.18699 + 3.52110I$
$u = -1.31208 - 0.53837I$ $a = -0.230879 - 0.508463I$ $b = -0.287446 + 0.374984I$	$2.38542 + 0.59111I$	$10.18699 - 3.52110I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{20}-13u^{19}+\cdots-10u+1)$ $\cdot(u^{68}+74u^{67}+\cdots+5731546u+418609)$
c_2	$(u^{20}+u^{19}+\cdots-4u+1)(u^{68}+37u^{66}+\cdots-3274u+647)$
c_3	$(u^{20}+u^{19}+\cdots+2u+4)(u^{68}-21u^{66}+\cdots+22u+4)$
c_4	$(u^{20}+6u^{18}+\cdots-7u+1)(u^{68}-u^{67}+\cdots-11u+1)$
c_5	$(u^{20}-3u^{19}+\cdots-83u+19)(u^{68}+15u^{66}+\cdots+135093u+1093)$
c_6	$(u^{20}-2u^{19}+\cdots-4u+1)(u^{68}+u^{67}+\cdots-16u^2+1)$
c_7	$(u^{20}-u^{19}+\cdots+4u+1)(u^{68}+37u^{66}+\cdots-3274u+647)$
c_8	$(u^{20}+6u^{18}+\cdots+7u+1)(u^{68}-u^{67}+\cdots-11u+1)$
c_9	$(u^{20}-8u^{19}+\cdots+10u+1)(u^{68}+5u^{67}+\cdots+52344u+5441)$
c_{10}	$(u^{20}-u^{19}+\cdots+u^2+1)(u^{68}+2u^{67}+\cdots-82u+23)$
c_{11}	$(u^{20}-u^{19}+\cdots-2u+4)(u^{68}-21u^{66}+\cdots+22u+4)$
c_{12}	$(u^{20}-u^{19}+\cdots-2u+1)(u^{68}-10u^{67}+\cdots-74106u+4643)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{20}-31y^{19}+\cdots+58y+1)$ $\cdot(y^{68}-138y^{67}+\cdots+15388310151698y+175233494881)$
c_2, c_7	$(y^{20}+13y^{19}+\cdots+10y+1)$ $\cdot(y^{68}+74y^{67}+\cdots+5731546y+418609)$
c_3, c_{11}	$(y^{20}-15y^{19}+\cdots-140y+16)(y^{68}-42y^{67}+\cdots-428y+16)$
c_4, c_8	$(y^{20}+12y^{19}+\cdots+3y+1)(y^{68}+9y^{67}+\cdots-13y+1)$
c_5	$(y^{20}-3y^{19}+\cdots+825y+361)$ $\cdot(y^{68}+30y^{67}+\cdots-20226072467y+1194649)$
c_6	$(y^{20}-4y^{19}+\cdots-4y+1)(y^{68}-3y^{67}+\cdots-32y+1)$
c_9	$(y^{20}+8y^{19}+\cdots-88y+1)$ $\cdot(y^{68}+97y^{67}+\cdots+2711378272y+29604481)$
c_{10}	$(y^{20}+11y^{19}+\cdots+2y+1)(y^{68}+70y^{66}+\cdots+6570y+529)$
c_{12}	$(y^{20}-7y^{19}+\cdots-2y+1)$ $\cdot(y^{68}-38y^{67}+\cdots-545000606y+21557449)$