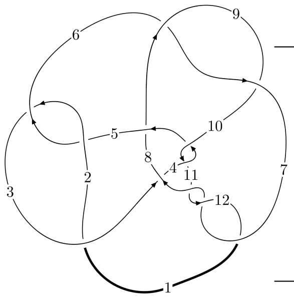
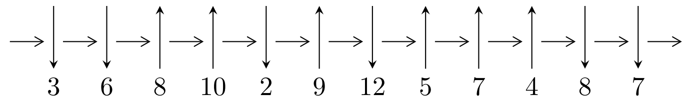
$12n_{0493}$ ($K12n_{0493}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -5.43760 \times 10^{104} u^{68} + 2.00230 \times 10^{105} u^{67} + \cdots + 1.22634 \times 10^{105} b - 1.11649 \times 10^{106}, \\ & 4.64010 \times 10^{105} u^{68} - 1.59745 \times 10^{106} u^{67} + \cdots + 1.34897 \times 10^{106} a + 7.48313 \times 10^{106}, \\ & u^{69} - 4u^{68} + \cdots + 56u - 11 \rangle \\ I_2^u = \langle & 10u^{22} + 5u^{21} + \cdots + b - 13,\ 5u^{22} + 2u^{21} + \cdots + a - 3,\ u^{23} + u^{22} + \cdots - u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 92 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. $\boldsymbol{I_1^u = \langle -5.44 \times 10^{104} u^{68} + 2.00 \times 10^{105} u^{67} + \cdots + 1.23 \times 10^{105} b - 1.12 \times 10^{106},\ 4.64 \times 10^{105} u^{68} - 1.60 \times 10^{106} u^{67} + \cdots + 1.35 \times 10^{106} a + 7.48 \times 10^{106},\ u^{69} - 4u^{68} + \cdots + 56u - 11 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.343973u^{68} + 1.18420u^{67} + \cdots + 17.5685u - 5.54728 \\ 0.443401u^{68} - 1.63275u^{67} + \cdots - 32.3170u + 9.10424 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.576164u^{68} + 1.77245u^{67} + \cdots + 24.1892u - 5.92136 \\ -0.358276u^{68} + 0.999822u^{67} + \cdots + 13.4977u - 3.58010 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.494384u^{68} - 1.74440u^{67} + \cdots - 36.5327u + 8.98958 \\ 0.165294u^{68} - 0.478041u^{67} + \cdots - 7.38945u + 2.38124 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1.10192u^{68} - 3.35873u^{67} + \cdots - 47.8714u + 14.8013 \\ 0.0132321u^{68} - 0.00521372u^{67} + \cdots + 5.24343u - 0.0882060 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.311783u^{68} + 1.36760u^{67} + \cdots + 27.5302u - 9.20533 \\ 0.475591u^{68} - 1.44935u^{67} + \cdots - 22.3553u + 5.44619 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.842075u^{68} - 3.29112u^{67} + \cdots - 71.9419u + 20.0300 \\ -0.344233u^{68} + 0.630033u^{67} + \cdots - 6.87988u + 4.46895 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.829938u^{68} + 1.76140u^{67} + \cdots - 4.47063u + 5.32558 \\ -1.27286u^{68} + 3.52866u^{67} + \cdots + 35.8363u - 4.75348 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 3.43232u^{68} - 10.6390u^{67} + \cdots - 136.515u + 28.1198$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{69} + 36u^{68} + \cdots + 474u + 121$
c_2, c_5	$u^{69} + 4u^{68} + \cdots + 56u + 11$
c_3	$u^{69} + u^{68} + \cdots + 29817u + 6379$
c_4, c_{10}	$u^{69} + 3u^{68} + \cdots - 1049u + 701$
c_6, c_9	$u^{69} - 3u^{68} + \cdots + 55u + 193$
c_7, c_{11}, c_{12}	$u^{69} + 2u^{68} + \cdots + 13u - 1$
c_8	$u^{69} - u^{68} + \cdots + 395u - 29$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{69} + 8y^{68} + \cdots - 141470y - 14641$
c_2, c_5	$y^{69} - 36y^{68} + \cdots + 474y - 121$
c_3	$y^{69} + 81y^{68} + \cdots - 1405779003y - 40691641$
c_4, c_{10}	$y^{69} + 77y^{68} + \cdots - 18986053y - 491401$
c_6, c_9	$y^{69} - 33y^{68} + \cdots + 199499y - 37249$
c_7, c_{11}, c_{12}	$y^{69} + 20y^{68} + \cdots + 9y - 1$
c_8	$y^{69} - 23y^{68} + \cdots + 200453y - 841$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.290552 + 0.976534I$ $a = 0.662659 + 1.042150I$ $b = -0.021606 + 0.325176I$	$3.93320 - 4.10094I$	$0. + 7.59043I$
$u = -0.290552 - 0.976534I$ $a = 0.662659 - 1.042150I$ $b = -0.021606 - 0.325176I$	$3.93320 + 4.10094I$	$0. - 7.59043I$
$u = 0.170915 + 1.016760I$ $a = 0.735038 - 0.888007I$ $b = -0.122632 + 0.149326I$	$-3.69662 + 2.16087I$	0
$u = 0.170915 - 1.016760I$ $a = 0.735038 + 0.888007I$ $b = -0.122632 - 0.149326I$	$-3.69662 - 2.16087I$	0
$u = 0.845794 + 0.445199I$ $a = 1.042270 - 0.541687I$ $b = 1.05454 - 1.32366I$	$1.75302 + 0.23405I$	$2.64178 + 0.I$
$u = 0.845794 - 0.445199I$ $a = 1.042270 + 0.541687I$ $b = 1.05454 + 1.32366I$	$1.75302 - 0.23405I$	$2.64178 + 0.I$
$u = 0.798359 + 0.685065I$ $a = 1.103240 - 0.280353I$ $b = 0.552794 - 0.298714I$	$2.19476 + 0.59175I$	0
$u = 0.798359 - 0.685065I$ $a = 1.103240 + 0.280353I$ $b = 0.552794 + 0.298714I$	$2.19476 - 0.59175I$	0
$u = -0.611426 + 0.705280I$ $a = 0.834581 + 0.752090I$ $b = -0.413709 - 0.331884I$	$6.87382 + 1.62388I$	$8.32922 - 2.64435I$
$u = -0.611426 - 0.705280I$ $a = 0.834581 - 0.752090I$ $b = -0.413709 + 0.331884I$	$6.87382 - 1.62388I$	$8.32922 + 2.64435I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.673306+0.638312I$ $a=-1.45289-0.49248I$ $b=-0.339907+0.110846I$	$2.72164-0.99882I$	$0.-1.55232I$
$u=-0.673306-0.638312I$ $a=-1.45289+0.49248I$ $b=-0.339907-0.110846I$	$2.72164+0.99882I$	$0.+1.55232I$
$u=\ \ 0.828451+0.406795I$ $a=\ \ 1.37279-0.90899I$ $b=\ \ 0.076668-0.891427I$	$1.87674-3.82550I$	$0.+7.69744I$
$u=\ \ 0.828451-0.406795I$ $a=\ \ 1.37279+0.90899I$ $b=\ \ 0.076668+0.891427I$	$1.87674+3.82550I$	$0.-7.69744I$
$u=-1.011290+0.463825I$ $a=-0.817036-1.011240I$ $b=-1.21636-1.85408I$	$1.46489+5.12150I$	0
$u=-1.011290-0.463825I$ $a=-0.817036+1.011240I$ $b=-1.21636+1.85408I$	$1.46489-5.12150I$	0
$u=-1.048530+0.378591I$ $a=\ \ 0.491834-0.900948I$ $b=\ \ 0.00957-1.57580I$	$-2.49072+3.79882I$	0
$u=-1.048530-0.378591I$ $a=\ \ 0.491834+0.900948I$ $b=\ \ 0.00957+1.57580I$	$-2.49072-3.79882I$	0
$u=\ \ 0.398655+1.050660I$ $a=-0.931521+0.797871I$ $b=\ \ 0.157270+0.032104I$	$-2.97736+9.69199I$	0
$u=\ \ 0.398655-1.050660I$ $a=-0.931521-0.797871I$ $b=\ \ 0.157270-0.032104I$	$-2.97736-9.69199I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.843195 + 0.221726I$ $a = -0.93965 + 1.06792I$ $b = -0.52957 + 1.58476I$	$-1.18583 - 1.43148I$	$3.84710 - 6.37744I$
$u = -0.843195 - 0.221726I$ $a = -0.93965 - 1.06792I$ $b = -0.52957 - 1.58476I$	$-1.18583 + 1.43148I$	$3.84710 + 6.37744I$
$u = -0.592910 + 0.619767I$ $a = -1.42026 - 0.66221I$ $b = -0.267942 + 0.039618I$	$2.72523 - 1.00845I$	$1.13200 - 1.33542I$
$u = -0.592910 - 0.619767I$ $a = -1.42026 + 0.66221I$ $b = -0.267942 - 0.039618I$	$2.72523 + 1.00845I$	$1.13200 + 1.33542I$
$u = 0.937541 + 0.663875I$ $a = 0.369232 - 1.125340I$ $b = 0.23643 - 1.79333I$	$1.73480 - 5.81339I$	0
$u = 0.937541 - 0.663875I$ $a = 0.369232 + 1.125340I$ $b = 0.23643 + 1.79333I$	$1.73480 + 5.81339I$	0
$u = 1.095940 + 0.350670I$ $a = -0.474582 + 0.632682I$ $b = -1.72631 + 1.19121I$	$3.07674 - 3.26894I$	0
$u = 1.095940 - 0.350670I$ $a = -0.474582 - 0.632682I$ $b = -1.72631 - 1.19121I$	$3.07674 + 3.26894I$	0
$u = -1.081310 + 0.487072I$ $a = -0.659733 - 0.708574I$ $b = 0.62165 - 1.72240I$	$-7.58609 + 6.42641I$	0
$u = -1.081310 - 0.487072I$ $a = -0.659733 + 0.708574I$ $b = 0.62165 + 1.72240I$	$-7.58609 - 6.42641I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.105510 + 0.431642I$ $a = 1.004780 + 0.584794I$ $b = 0.26453 + 1.61847I$	$-7.94202 - 0.79088I$	0
$u = 1.105510 - 0.431642I$ $a = 1.004780 - 0.584794I$ $b = 0.26453 - 1.61847I$	$-7.94202 + 0.79088I$	0
$u = -1.147280 + 0.304107I$ $a = 0.550803 + 0.761091I$ $b = -0.31435 + 1.82784I$	$-9.68321 - 0.62268I$	0
$u = -1.147280 - 0.304107I$ $a = 0.550803 - 0.761091I$ $b = -0.31435 - 1.82784I$	$-9.68321 + 0.62268I$	0
$u = -0.993265 + 0.683955I$ $a = -0.282845 - 1.144910I$ $b = -0.76540 - 1.96652I$	$1.75235 + 6.29447I$	0
$u = -0.993265 - 0.683955I$ $a = -0.282845 + 1.144910I$ $b = -0.76540 + 1.96652I$	$1.75235 - 6.29447I$	0
$u = 1.207420 + 0.035311I$ $a = 0.069551 + 0.357262I$ $b = 0.526334 + 0.627810I$	$-2.81273 - 0.16209I$	0
$u = 1.207420 - 0.035311I$ $a = 0.069551 - 0.357262I$ $b = 0.526334 - 0.627810I$	$-2.81273 + 0.16209I$	0
$u = -1.033920 + 0.650381I$ $a = 0.381960 + 0.552392I$ $b = 1.18877 + 1.43009I$	$5.59026 + 3.61321I$	0
$u = -1.033920 - 0.650381I$ $a = 0.381960 - 0.552392I$ $b = 1.18877 - 1.43009I$	$5.59026 - 3.61321I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 1.117680 + 0.556781I$ $a = -0.890564 - 0.750983I$ $b = -0.37281 - 1.65828I$	$-7.95415 - 8.38570I$	0
$u = \quad 1.117680 - 0.556781I$ $a = -0.890564 + 0.750983I$ $b = -0.37281 + 1.65828I$	$-7.95415 + 8.38570I$	0
$u = \quad 1.085710 + 0.625989I$ $a = -0.503128 + 0.612693I$ $b = -0.287588 + 1.243300I$	$-1.07599 - 2.78600I$	0
$u = \quad 1.085710 - 0.625989I$ $a = -0.503128 - 0.612693I$ $b = -0.287588 - 1.243300I$	$-1.07599 + 2.78600I$	0
$u = \quad 0.798698 + 0.974655I$ $a = -0.432695 + 0.595898I$ $b = -0.166512 + 0.361764I$	$-0.24985 - 3.26069I$	0
$u = \quad 0.798698 - 0.974655I$ $a = -0.432695 - 0.595898I$ $b = -0.166512 - 0.361764I$	$-0.24985 + 3.26069I$	0
$u = \quad 0.319351 + 0.663934I$ $a = \quad 1.11830 + 1.01941I$ $b = -0.155956 + 1.246900I$	$-5.68469 + 3.59684I$	$0.14375 - 2.17339I$
$u = \quad 0.319351 - 0.663934I$ $a = \quad 1.11830 - 1.01941I$ $b = -0.155956 - 1.246900I$	$-5.68469 - 3.59684I$	$0.14375 + 2.17339I$
$u = \quad 0.961426 + 0.848715I$ $a = -0.426077 + 0.482317I$ $b = -0.077045 + 1.197380I$	$-0.94415 - 3.29961I$	0
$u = \quad 0.961426 - 0.848715I$ $a = -0.426077 - 0.482317I$ $b = -0.077045 - 1.197380I$	$-0.94415 + 3.29961I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.687662 + 0.185413I$ $a = -1.79140 - 0.10939I$ $b = 0.487312 - 1.099210I$	$4.79965 + 0.76507I$	$-0.89012 - 1.45079I$
$u = 0.687662 - 0.185413I$ $a = -1.79140 + 0.10939I$ $b = 0.487312 + 1.099210I$	$4.79965 - 0.76507I$	$-0.89012 + 1.45079I$
$u = -1.196820 + 0.622088I$ $a = 0.667975 + 0.833159I$ $b = 0.97633 + 1.75198I$	$1.19205 + 9.84022I$	0
$u = -1.196820 - 0.622088I$ $a = 0.667975 - 0.833159I$ $b = 0.97633 - 1.75198I$	$1.19205 - 9.84022I$	0
$u = 1.258550 + 0.582507I$ $a = 0.452188 - 0.889836I$ $b = 1.10957 - 1.91755I$	$-7.04483 - 7.85806I$	0
$u = 1.258550 - 0.582507I$ $a = 0.452188 + 0.889836I$ $b = 1.10957 + 1.91755I$	$-7.04483 + 7.85806I$	0
$u = 1.213600 + 0.688126I$ $a = -0.517780 + 0.965581I$ $b = -1.02405 + 2.11674I$	$-5.5104 - 15.9437I$	0
$u = 1.213600 - 0.688126I$ $a = -0.517780 - 0.965581I$ $b = -1.02405 - 2.11674I$	$-5.5104 + 15.9437I$	0
$u = -0.499390 + 0.340618I$ $a = -0.919752 - 0.049244I$ $b = 0.05015 - 2.33868I$	$-5.61165 - 2.54761I$	$5.30359 + 0.02313I$
$u = -0.499390 - 0.340618I$ $a = -0.919752 + 0.049244I$ $b = 0.05015 + 2.33868I$	$-5.61165 + 2.54761I$	$5.30359 - 0.02313I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.43623$ $a = -0.433547$ $b = -0.479698$	-2.53296	0
$u = -1.41770 + 0.37374I$ $a = -0.534463 + 0.162015I$ $b = -1.213010 + 0.496378I$	$-8.86518 + 2.79325I$	0
$u = -1.41770 - 0.37374I$ $a = -0.534463 - 0.162015I$ $b = -1.213010 - 0.496378I$	$-8.86518 - 2.79325I$	0
$u = -1.46407 + 0.12048I$ $a = 0.606194 - 0.353781I$ $b = 1.12078 - 0.89971I$	$-9.73214 - 5.62474I$	0
$u = -1.46407 - 0.12048I$ $a = 0.606194 + 0.353781I$ $b = 1.12078 + 0.89971I$	$-9.73214 + 5.62474I$	0
$u = 0.262574 + 0.365414I$ $a = -1.05942 - 1.83282I$ $b = 0.95586 - 1.50255I$	$-5.45507 - 2.87217I$	$0.41122 + 5.66898I$
$u = 0.262574 - 0.365414I$ $a = -1.05942 + 1.83282I$ $b = 0.95586 + 1.50255I$	$-5.45507 + 2.87217I$	$0.41122 - 5.66898I$
$u = 0.093022 + 0.383439I$ $a = -0.920079 - 0.537348I$ $b = -0.133968 + 0.391648I$	$0.152285 - 1.032960I$	$2.47400 + 6.54310I$
$u = 0.093022 - 0.383439I$ $a = -0.920079 + 0.537348I$ $b = -0.133968 - 0.391648I$	$0.152285 + 1.032960I$	$2.47400 - 6.54310I$

II.
$\boldsymbol{I_2^u = \langle 10u^{22}+5u^{21}+\cdots+b-13,\ 5u^{22}+2u^{21}+\cdots+a-3,\ u^{23}+u^{22}+\cdots-u-1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -5u^{22} - 2u^{21} + \cdots + u + 3 \\ -10u^{22} - 5u^{21} + \cdots - 5u + 13 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -2u^{22} - 3u^{21} + \cdots - 2u + 3 \\ -4u^{22} - 3u^{21} + \cdots - 6u + 4 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{22} + 5u^{20} + \cdots - u^2 - 4u \\ -8u^{22} - 2u^{21} + \cdots - 4u + 11 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -5u^{22} - 3u^{21} + \cdots - 6u + 9 \\ -7u^{22} - 4u^{21} + \cdots - 14u + 16 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -5u^{22} - u^{21} + \cdots + 4u + 1 \\ -10u^{22} - 4u^{21} + \cdots - 2u + 11 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 3u^{22} + u^{21} + \cdots - u - 7 \\ 4u^{22} + 2u^{21} + \cdots + 5u - 9 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -2u^{22} - 2u^{21} + \cdots + 9u^2 - 3u \\ 5u^{22} + u^{21} + \cdots + u - 7 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 10u^{21} + 6u^{20} - 52u^{19} - 29u^{18} + 158u^{17} + 88u^{16} - 345u^{15} - 211u^{14} + 537u^{13} + 359u^{12} - 638u^{11} - 465u^{10} + 558u^9 + 395u^8 - 397u^7 - 259u^6 + 220u^5 + 99u^4 - 84u^3 - 22u^2 + 29u$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 13u^{22} + \cdots + 13u - 1$
c_2	$u^{23} + u^{22} + \cdots - u - 1$
c_3	$u^{23} + 2u^{21} + \cdots + 2u - 1$
c_4	$u^{23} + 12u^{21} + \cdots + 19u^2 + 1$
c_5	$u^{23} - u^{22} + \cdots - u + 1$
c_6	$u^{23} + 4u^{22} + \cdots + 4u + 1$
c_7	$u^{23} + u^{22} + \cdots - 6u^2 - 1$
c_8	$u^{23} - 8u^{21} + \cdots + 8u^2 + 1$
c_9	$u^{23} - 4u^{22} + \cdots + 4u - 1$
c_{10}	$u^{23} + 12u^{21} + \cdots - 19u^2 - 1$
c_{11}, c_{12}	$u^{23} - u^{22} + \cdots + 6u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} + 7y^{22} + \cdots - 7y - 1$
c_2, c_5	$y^{23} - 13y^{22} + \cdots + 13y - 1$
c_3	$y^{23} + 4y^{22} + \cdots - 28y - 1$
c_4, c_{10}	$y^{23} + 24y^{22} + \cdots - 38y - 1$
c_6, c_9	$y^{23} - 14y^{22} + \cdots - 2y - 1$
c_7, c_{11}, c_{12}	$y^{23} + 19y^{22} + \cdots - 12y - 1$
c_8	$y^{23} - 16y^{22} + \cdots - 16y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.727530 + 0.675450I$ $a = -1.56715 - 0.40087I$ $b = -0.658564 + 0.037949I$	$3.36055 - 1.47768I$	$8.91324 + 4.94896I$
$u = -0.727530 - 0.675450I$ $a = -1.56715 + 0.40087I$ $b = -0.658564 - 0.037949I$	$3.36055 + 1.47768I$	$8.91324 - 4.94896I$
$u = -0.714405 + 0.569856I$ $a = 1.342420 + 0.352259I$ $b = -0.106804 - 0.755904I$	$5.87840 - 0.07399I$	$4.63766 - 1.08939I$
$u = -0.714405 - 0.569856I$ $a = 1.342420 - 0.352259I$ $b = -0.106804 + 0.755904I$	$5.87840 + 0.07399I$	$4.63766 + 1.08939I$
$u = 0.873281 + 0.058843I$ $a = 0.641877 + 1.056520I$ $b = 0.66167 + 1.39799I$	$-1.38657 + 1.89044I$	$-3.01798 - 8.02298I$
$u = 0.873281 - 0.058843I$ $a = 0.641877 - 1.056520I$ $b = 0.66167 - 1.39799I$	$-1.38657 - 1.89044I$	$-3.01798 + 8.02298I$
$u = 0.682792 + 0.510727I$ $a = -1.015220 + 0.899830I$ $b = 0.801359 + 0.100013I$	$5.58168 - 2.30519I$	$2.87757 + 4.60257I$
$u = 0.682792 - 0.510727I$ $a = -1.015220 - 0.899830I$ $b = 0.801359 - 0.100013I$	$5.58168 + 2.30519I$	$2.87757 - 4.60257I$
$u = -1.013700 + 0.592894I$ $a = 0.385259 + 0.861396I$ $b = 1.35384 + 1.59496I$	$4.88003 + 4.72768I$	$2.32962 - 6.66073I$
$u = -1.013700 - 0.592894I$ $a = 0.385259 - 0.861396I$ $b = 1.35384 - 1.59496I$	$4.88003 - 4.72768I$	$2.32962 + 6.66073I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.966870+0.667630I$ $a=-0.395637-1.302340I$ $b=-0.71928-2.04019I$	$2.61955+6.69998I$	$6.96792-9.85887I$
$u=-0.966870-0.667630I$ $a=-0.395637+1.302340I$ $b=-0.71928+2.04019I$	$2.61955-6.69998I$	$6.96792+9.85887I$
$u=1.075530+0.534802I$ $a=-0.628727+0.324551I$ $b=-1.44754+1.17940I$	$4.23211-1.97181I$	$3.03479+1.17838I$
$u=1.075530-0.534802I$ $a=-0.628727-0.324551I$ $b=-1.44754-1.17940I$	$4.23211+1.97181I$	$3.03479-1.17838I$
$u=-1.303880+0.187284I$ $a=-0.064693-0.287125I$ $b=-0.366099+0.386969I$	$-8.98729+3.97495I$	$-2.00222-3.71380I$
$u=-1.303880-0.187284I$ $a=-0.064693+0.287125I$ $b=-0.366099-0.386969I$	$-8.98729-3.97495I$	$-2.00222+3.71380I$
$u=0.490623+0.440201I$ $a=1.30058-1.63355I$ $b=0.139386-0.970644I$	$2.16809-2.83861I$	$2.59802+1.74039I$
$u=0.490623-0.440201I$ $a=1.30058+1.63355I$ $b=0.139386+0.970644I$	$2.16809+2.83861I$	$2.59802-1.74039I$
$u=-0.616125+0.120813I$ $a=-0.586870+0.956582I$ $b=-0.61338+2.92957I$	$-6.13496-2.58789I$	$-11.43780+1.43765I$
$u=-0.616125-0.120813I$ $a=-0.586870-0.956582I$ $b=-0.61338-2.92957I$	$-6.13496+2.58789I$	$-11.43780-1.43765I$

Solutions to I_2^u		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u=$	$1.012970 + 0.928867I$		
$a=$	$0.352126 - 0.506370I$	$-1.20499 - 3.62050I$	$-8.5555 + 14.1463I$
$b=$	$0.042965 - 1.016720I$		
$u=$	$1.012970 - 0.928867I$		
$a=$	$0.352126 + 0.506370I$	$-1.20499 + 3.62050I$	$-8.5555 - 14.1463I$
$b=$	$0.042965 + 1.016720I$		
$u=$	1.41461		
$a=$	0.472066	-2.27398	14.3090
$b=$	0.824925		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{23}-13u^{22}+\cdots+13u-1)(u^{69}+36u^{68}+\cdots+474u+121)$
c_2	$(u^{23}+u^{22}+\cdots-u-1)(u^{69}+4u^{68}+\cdots+56u+11)$
c_3	$(u^{23}+2u^{21}+\cdots+2u-1)(u^{69}+u^{68}+\cdots+29817u+6379)$
c_4	$(u^{23}+12u^{21}+\cdots+19u^2+1)(u^{69}+3u^{68}+\cdots-1049u+701)$
c_5	$(u^{23}-u^{22}+\cdots-u+1)(u^{69}+4u^{68}+\cdots+56u+11)$
c_6	$(u^{23}+4u^{22}+\cdots+4u+1)(u^{69}-3u^{68}+\cdots+55u+193)$
c_7	$(u^{23}+u^{22}+\cdots-6u^2-1)(u^{69}+2u^{68}+\cdots+13u-1)$
c_8	$(u^{23}-8u^{21}+\cdots+8u^2+1)(u^{69}-u^{68}+\cdots+395u-29)$
c_9	$(u^{23}-4u^{22}+\cdots+4u-1)(u^{69}-3u^{68}+\cdots+55u+193)$
c_{10}	$(u^{23}+12u^{21}+\cdots-19u^2-1)(u^{69}+3u^{68}+\cdots-1049u+701)$
c_{11}, c_{12}	$(u^{23}-u^{22}+\cdots+6u^2+1)(u^{69}+2u^{68}+\cdots+13u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{23}+7y^{22}+\cdots-7y-1)(y^{69}+8y^{68}+\cdots-141470y-14641)$
c_2, c_5	$(y^{23}-13y^{22}+\cdots+13y-1)(y^{69}-36y^{68}+\cdots+474y-121)$
c_3	$(y^{23}+4y^{22}+\cdots-28y-1)$ $\cdot(y^{69}+81y^{68}+\cdots-1405779003y-40691641)$
c_4, c_{10}	$(y^{23}+24y^{22}+\cdots-38y-1)$ $\cdot(y^{69}+77y^{68}+\cdots-18986053y-491401)$
c_6, c_9	$(y^{23}-14y^{22}+\cdots-2y-1)(y^{69}-33y^{68}+\cdots+199499y-37249)$
c_7, c_{11}, c_{12}	$(y^{23}+19y^{22}+\cdots-12y-1)(y^{69}+20y^{68}+\cdots+9y-1)$
c_8	$(y^{23}-16y^{22}+\cdots-16y-1)(y^{69}-23y^{68}+\cdots+200453y-841)$