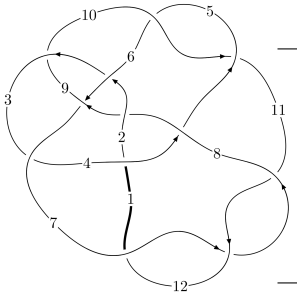
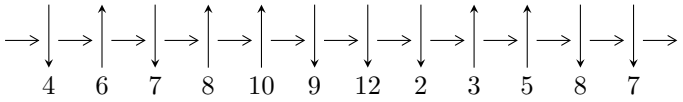
$12n_{0716}$ $(K12n_{0716})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 9.32641 \times 10^{147} u^{57} - 3.65205 \times 10^{146} u^{56} + \cdots + 6.45245 \times 10^{146} b + 1.05947 \times 10^{149}, \\ & 3.12608 \times 10^{148} u^{57} + 1.49996 \times 10^{148} u^{56} + \cdots + 6.45245 \times 10^{146} a + 9.19957 \times 10^{149}, \\ & u^{58} + u^{57} + \cdots + 102u + 17 \rangle \\ I_2^u = \langle & 6502096368680 u^{18} + 40798146932259 u^{17} + \cdots + 25298539696097 b + 12982884850055, \\ & - 18835536785489 u^{18} - 89002616845968 u^{17} + \cdots + 25298539696097 a - 49130182644029, \\ & u^{19} + 4u^{18} + \cdots - 2u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 77 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. $\boldsymbol{I_1^u = \langle 9.33 \times 10^{147} u^{57} - 3.65 \times 10^{146} u^{56} + \cdots + 6.45 \times 10^{146} b + 1.06 \times 10^{149},\ 3.13 \times 10^{148} u^{57} + 1.50 \times 10^{148} u^{56} + \cdots + 6.45 \times 10^{146} a + 9.20 \times 10^{149},\ u^{58} + u^{57} + \cdots + 102u + 17 \rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -48.4480u^{57} - 23.2464u^{56} + \cdots - 6241.67u - 1425.75 \\ -14.4541u^{57} + 0.565994u^{56} + \cdots - 1020.45u - 164.197 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -73.7734u^{57} - 30.7942u^{56} + \cdots - 9009.07u - 2018.38 \\ -2.48392u^{57} + 4.81221u^{56} + \cdots + 362.332u + 138.022 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -71.2895u^{57} - 35.6064u^{56} + \cdots - 9371.40u - 2156.40 \\ -2.48392u^{57} + 4.81221u^{56} + \cdots + 362.332u + 138.022 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -49.2274u^{57} - 16.9528u^{56} + \cdots - 5838.76u - 1396.24 \\ 17.8595u^{57} + 6.03724u^{56} + \cdots + 2066.98u + 466.549 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 87.3955u^{57} + 43.1083u^{56} + \cdots + 11436.3u + 2572.35 \\ -17.4932u^{57} - 11.0326u^{56} + \cdots - 2593.30u - 626.761 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -25.1085u^{57} + 7.32127u^{56} + \cdots - 879.198u - 1.92119 \\ 13.8487u^{57} + 4.28606u^{56} + \cdots + 1443.05u + 285.809 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -38.4720u^{57} - 15.8661u^{56} + \cdots - 4872.65u - 1186.00 \\ 8.37163u^{57} + 3.81598u^{56} + \cdots + 1075.83u + 256.175 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 69.9024u^{57} + 32.0757u^{56} + \cdots + 8843.00u + 1945.59 \\ -17.4932u^{57} - 11.0326u^{56} + \cdots - 2593.30u - 626.761 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 188.771u^{57} + 57.7574u^{56} + \cdots + 20419.4u + 4195.36 \\ -55.5034u^{57} - 26.6276u^{56} + \cdots - 7148.10u - 1617.81 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 152.678u^{57} + 38.4757u^{56} + \cdots + 15871.4u + 3232.62$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{58}+4u^{57}+\cdots+36890u+11033$
c_2	$u^{58}-3u^{57}+\cdots+14u+29$
c_3	$u^{58}-u^{57}+\cdots+3040u+373$
c_4	$u^{58}-u^{57}+\cdots-79133u+6037$
c_5, c_{10}	$u^{58}-u^{57}+\cdots+226u+299$
c_6	$u^{58}-u^{57}+\cdots-102u+17$
c_7, c_{11}, c_{12}	$u^{58}-u^{56}+\cdots-77u+67$
c_8	$u^{58}-u^{57}+\cdots-318u+37$
c_9	$u^{58}-u^{57}+\cdots+597u+301$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{58} - 70y^{57} + \cdots + 4940625850y + 121727089$
c_2	$y^{58} + 11y^{57} + \cdots + 23062y + 841$
c_3	$y^{58} - 67y^{57} + \cdots - 4505246y + 139129$
c_4	$y^{58} + 97y^{57} + \cdots - 269971117y + 36445369$
c_5, c_{10}	$y^{58} + 77y^{57} + \cdots + 6195034y + 89401$
c_6	$y^{58} - 7y^{57} + \cdots - 11084y + 289$
c_7, c_{11}, c_{12}	$y^{58} - 2y^{57} + \cdots - 22277y + 4489$
c_8	$y^{58} - 13y^{57} + \cdots - 27050y + 1369$
c_9	$y^{58} + 39y^{57} + \cdots + 3573447y + 90601$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.978354 + 0.283113I$ $a = -1.022500 - 0.316283I$ $b = 2.12647 + 2.00443I$	$-13.17140 + 2.12358I$	0
$u = 0.978354 - 0.283113I$ $a = -1.022500 + 0.316283I$ $b = 2.12647 - 2.00443I$	$-13.17140 - 2.12358I$	0
$u = -0.752867 + 0.705964I$ $a = -1.47988 + 0.29568I$ $b = 0.711075 - 0.693834I$	$2.00803 + 4.95664I$	0
$u = -0.752867 - 0.705964I$ $a = -1.47988 - 0.29568I$ $b = 0.711075 + 0.693834I$	$2.00803 - 4.95664I$	0
$u = -0.021606 + 1.042490I$ $a = 0.605699 - 0.199313I$ $b = -0.087128 - 0.351024I$	$-1.04699 - 2.20023I$	0
$u = -0.021606 - 1.042490I$ $a = 0.605699 + 0.199313I$ $b = -0.087128 + 0.351024I$	$-1.04699 + 2.20023I$	0
$u = 0.730237 + 0.516053I$ $a = 0.945824 - 0.083393I$ $b = -0.608386 - 0.180858I$	$-1.28329 - 0.82809I$	0
$u = 0.730237 - 0.516053I$ $a = 0.945824 + 0.083393I$ $b = -0.608386 + 0.180858I$	$-1.28329 + 0.82809I$	0
$u = -1.011420 + 0.459011I$ $a = 1.005890 + 0.081651I$ $b = -1.98236 - 0.47508I$	$-8.23668 + 4.75000I$	0
$u = -1.011420 - 0.459011I$ $a = 1.005890 - 0.081651I$ $b = -1.98236 + 0.47508I$	$-8.23668 - 4.75000I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.808030+0.355010I$ $a=-1.248830+0.214250I$ $b=\ \ 2.12302-1.95955I$	$-12.9566+6.6659I$	$-8.33432-5.93696I$
$u=-0.808030-0.355010I$ $a=-1.248830-0.214250I$ $b=\ \ 2.12302+1.95955I$	$-12.9566-6.6659I$	$-8.33432+5.93696I$
$u=\ \ 0.732606+0.484280I$ $a=-0.02375+1.60249I$ $b=\ \ 0.838938+0.086999I$	$-3.28744-3.99070I$	$-6.28941+10.46209I$
$u=\ \ 0.732606-0.484280I$ $a=-0.02375-1.60249I$ $b=\ \ 0.838938-0.086999I$	$-3.28744+3.99070I$	$-6.28941-10.46209I$
$u=\ \ 0.746409+0.883704I$ $a=-0.751616+0.255620I$ $b=\ \ 0.931800+0.019629I$	$-0.04235-4.12900I$	0
$u=\ \ 0.746409-0.883704I$ $a=-0.751616-0.255620I$ $b=\ \ 0.931800-0.019629I$	$-0.04235+4.12900I$	0
$u=\ \ 0.985690+0.715159I$ $a=\ \ 0.575617-0.238058I$ $b=-1.27171-0.91723I$	$-3.11700-0.41257I$	0
$u=\ \ 0.985690-0.715159I$ $a=\ \ 0.575617+0.238058I$ $b=-1.27171+0.91723I$	$-3.11700+0.41257I$	0
$u=\ \ 1.121880+0.476222I$ $a=-0.837277-0.112755I$ $b=\ \ 0.512753+0.236984I$	$-7.16469+0.96886I$	0
$u=\ \ 1.121880-0.476222I$ $a=-0.837277+0.112755I$ $b=\ \ 0.512753-0.236984I$	$-7.16469-0.96886I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.512119 + 0.545033I$ $a = -1.46989 - 3.06304I$ $b = -1.186610 + 0.163124I$	$-11.32390 - 5.55214I$	$-6.05702 + 10.68812I$
$u = 0.512119 - 0.545033I$ $a = -1.46989 + 3.06304I$ $b = -1.186610 - 0.163124I$	$-11.32390 + 5.55214I$	$-6.05702 - 10.68812I$
$u = -0.650731 + 0.360978I$ $a = -0.220817 + 0.270921I$ $b = 0.558549 + 0.592918I$	$0.97857 + 1.34764I$	$1.20863 - 1.90484I$
$u = -0.650731 - 0.360978I$ $a = -0.220817 - 0.270921I$ $b = 0.558549 - 0.592918I$	$0.97857 - 1.34764I$	$1.20863 + 1.90484I$
$u = -0.706988 + 0.191916I$ $a = 1.207780 + 0.336196I$ $b = -1.62149 + 1.23816I$	$-5.06129 + 2.88568I$	$-10.29317 - 4.15126I$
$u = -0.706988 - 0.191916I$ $a = 1.207780 - 0.336196I$ $b = -1.62149 - 1.23816I$	$-5.06129 - 2.88568I$	$-10.29317 + 4.15126I$
$u = -0.714136 + 0.102569I$ $a = 0.180781 - 0.094367I$ $b = 0.313317 + 0.970168I$	$0.95341 + 1.39786I$	$0. - 4.36298I$
$u = -0.714136 - 0.102569I$ $a = 0.180781 + 0.094367I$ $b = 0.313317 - 0.970168I$	$0.95341 - 1.39786I$	$0. + 4.36298I$
$u = -0.789280 + 1.027180I$ $a = 1.162150 + 0.098574I$ $b = -0.297760 + 1.314410I$	$3.72423 + 4.17964I$	0
$u = -0.789280 - 1.027180I$ $a = 1.162150 - 0.098574I$ $b = -0.297760 - 1.314410I$	$3.72423 - 4.17964I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.661484+0.131372I$ $a=-1.61381-1.76919I$ $b=1.142210-0.250578I$	$-4.95159-1.58123I$	$-12.72547+4.19342I$
$u=-0.661484-0.131372I$ $a=-1.61381+1.76919I$ $b=1.142210+0.250578I$	$-4.95159+1.58123I$	$-12.72547-4.19342I$
$u=-0.596881+0.223416I$ $a=1.45797+3.91853I$ $b=-1.215330-0.234147I$	$-12.26330-4.23472I$	$-15.9047-3.6723I$
$u=-0.596881-0.223416I$ $a=1.45797-3.91853I$ $b=-1.215330+0.234147I$	$-12.26330+4.23472I$	$-15.9047+3.6723I$
$u=0.356395+0.520924I$ $a=-1.69906+0.59493I$ $b=1.096080-0.085972I$	$1.80039-2.57383I$	$5.38400-2.93907I$
$u=0.356395-0.520924I$ $a=-1.69906-0.59493I$ $b=1.096080+0.085972I$	$1.80039+2.57383I$	$5.38400+2.93907I$
$u=0.885427+1.046070I$ $a=0.710398-0.265808I$ $b=-0.981104+0.026642I$	$-5.39449-7.69009I$	0
$u=0.885427-1.046070I$ $a=0.710398+0.265808I$ $b=-0.981104-0.026642I$	$-5.39449+7.69009I$	0
$u=0.486522+0.094968I$ $a=1.80254+0.26449I$ $b=-2.07362+0.92123I$	$-1.40037-1.47316I$	$-12.54545+3.45881I$
$u=0.486522-0.094968I$ $a=1.80254-0.26449I$ $b=-2.07362-0.92123I$	$-1.40037+1.47316I$	$-12.54545-3.45881I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.19352 + 0.94117I$ $a = -1.204670 + 0.063256I$ $b = 1.78387 + 1.43958I$	$-14.2334 - 6.5996I$	0
$u = 1.19352 - 0.94117I$ $a = -1.204670 - 0.063256I$ $b = 1.78387 - 1.43958I$	$-14.2334 + 6.5996I$	0
$u = 1.22610 + 0.96871I$ $a = 0.810697 - 0.054852I$ $b = -1.23911 - 0.82077I$	$-5.33251 - 5.39729I$	0
$u = 1.22610 - 0.96871I$ $a = 0.810697 + 0.054852I$ $b = -1.23911 + 0.82077I$	$-5.33251 + 5.39729I$	0
$u = -1.22293 + 1.02156I$ $a = -1.098950 - 0.142369I$ $b = 1.84153 - 1.40803I$	$-14.3837 + 15.6323I$	0
$u = -1.22293 - 1.02156I$ $a = -1.098950 + 0.142369I$ $b = 1.84153 + 1.40803I$	$-14.3837 - 15.6323I$	0
$u = -0.368757 + 0.122339I$ $a = -2.10821 - 2.73770I$ $b = 0.080985 - 0.743327I$	$-5.63216 + 2.85604I$	$-3.43519 - 6.70068I$
$u = -0.368757 - 0.122339I$ $a = -2.10821 + 2.73770I$ $b = 0.080985 + 0.743327I$	$-5.63216 - 2.85604I$	$-3.43519 + 6.70068I$
$u = -1.32331 + 0.93938I$ $a = 0.795174 + 0.113198I$ $b = -1.87724 + 0.86238I$	$-5.22956 + 10.04150I$	0
$u = -1.32331 - 0.93938I$ $a = 0.795174 - 0.113198I$ $b = -1.87724 - 0.86238I$	$-5.22956 - 10.04150I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.01030 + 1.36653I$ $a = 0.030621 - 0.683753I$ $b = -1.47110 + 0.34572I$	$-13.01410 - 1.61237I$	0
$u = 1.01030 - 1.36653I$ $a = 0.030621 + 0.683753I$ $b = -1.47110 - 0.34572I$	$-13.01410 + 1.61237I$	0
$u = 1.26701 + 1.22861I$ $a = -0.402511 + 0.274929I$ $b = 1.059920 + 0.313320I$	$-4.54366 - 3.45223I$	0
$u = 1.26701 - 1.22861I$ $a = -0.402511 - 0.274929I$ $b = 1.059920 - 0.313320I$	$-4.54366 + 3.45223I$	0
$u = -1.18838 + 1.41989I$ $a = 0.106667 + 0.601431I$ $b = -1.63734 - 0.17748I$	$-13.4658 - 6.8258I$	0
$u = -1.18838 - 1.41989I$ $a = 0.106667 - 0.601431I$ $b = -1.63734 + 0.17748I$	$-13.4658 + 6.8258I$	0
$u = -1.91576 + 2.38425I$ $a = -0.216048 - 0.243096I$ $b = 1.92977 - 2.11029I$	$-3.30943 + 0.07106I$	0
$u = -1.91576 - 2.38425I$ $a = -0.216048 + 0.243096I$ $b = 1.92977 + 2.11029I$	$-3.30943 - 0.07106I$	0

II.

$\boldsymbol{I_2^u = \langle 6.50\times 10^{12}u^{18}+4.08\times 10^{13}u^{17}+\cdots+2.53\times 10^{13}b+1.30\times 10^{13},\ -1.88\times 10^{13}u^{18}-8.90\times 10^{13}u^{17}+\cdots+2.53\times 10^{13}a-4.91\times 10^{13},\ u^{19}+4u^{18}+\cdots-2u+1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.744531u^{18} + 3.51809u^{17} + \cdots - 2.76311u + 1.94202 \\ -0.257015u^{18} - 1.61267u^{17} + \cdots + 0.202295u - 0.513187 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.540524u^{18} + 2.08714u^{17} + \cdots - 2.22540u + 0.888859 \\ -0.0370083u^{18} - 0.886816u^{17} + \cdots + 1.22815u - 1.12812 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.577533u^{18} + 2.97396u^{17} + \cdots - 3.45355u + 2.01697 \\ -0.0370083u^{18} - 0.886816u^{17} + \cdots + 1.22815u - 1.12812 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.20075u^{18} + 4.08882u^{17} + \cdots + 10.0167u - 1.90320 \\ 0.239898u^{18} + 0.598416u^{17} + \cdots + 6.21331u - 1.84331 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.752820u^{18} - 2.94691u^{17} + \cdots - 0.553470u - 0.451732 \\ 0.168444u^{18} + 0.743706u^{17} + \cdots - 0.318830u - 0.418813 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.90951u^{18} - 7.62147u^{17} + \cdots + 6.99781u - 3.67692 \\ -1.34248u^{18} - 5.54152u^{17} + \cdots - 3.28866u - 1.14524 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.673031u^{18} + 2.44887u^{17} + \cdots + 5.25821u + 1.01487 \\ 0.0389889u^{18} - 0.358490u^{17} + \cdots + 4.33387u - 2.03220 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.584376u^{18} - 2.20320u^{17} + \cdots - 0.872300u - 0.870545 \\ 0.168444u^{18} + 0.743706u^{17} + \cdots - 0.318830u - 0.418813 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.824046u^{18} - 2.14442u^{17} + \cdots - 15.2096u + 2.87817 \\ 0.442934u^{18} + 2.09877u^{17} + \cdots - 6.59494u + 2.09929 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= \frac{60039139679030}{25298539696097}u^{18} + \frac{320104751352385}{25298539696097}u^{17} + \cdots + \frac{314655911815936}{25298539696097}u - \frac{40421190702295}{25298539696097}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{19} - 15u^{18} + \cdots + 6u - 1$
c_2	$u^{19} - 4u^{18} + \cdots + 6u - 1$
c_3	$u^{19} + 2u^{18} + \cdots + 26u - 11$
c_4	$u^{19} + 7u^{17} + \cdots + 3u + 1$
c_5	$u^{19} + 6u^{18} + \cdots + 10u + 3$
c_6	$u^{19} + 4u^{18} + \cdots - 2u + 1$
c_7	$u^{19} + u^{18} + \cdots + 7u - 1$
c_8	$u^{19} + 2u^{18} + \cdots - 2u - 1$
c_9	$u^{19} + 10u^{17} + \cdots + 3u - 1$
c_{10}	$u^{19} - 6u^{18} + \cdots + 10u - 3$
c_{11}, c_{12}	$u^{19} - u^{18} + \cdots + 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{19} - 41y^{18} + \cdots - 10y - 1$
c_2	$y^{19} + 12y^{17} + \cdots + 46y - 1$
c_3	$y^{19} - 22y^{18} + \cdots + 698y - 121$
c_4	$y^{19} + 14y^{18} + \cdots + 65y - 1$
c_5, c_{10}	$y^{19} - 10y^{18} + \cdots - 86y - 9$
c_6	$y^{19} - 34y^{18} + \cdots - 8y - 1$
c_7, c_{11}, c_{12}	$y^{19} + 11y^{18} + \cdots + 21y - 1$
c_8	$y^{19} + 8y^{18} + \cdots - 14y - 1$
c_9	$y^{19} + 20y^{18} + \cdots + 25y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.980072 + 0.125353I$ $a = -0.254801 + 0.853262I$ $b = 0.0019611 + 0.1375350I$	$-6.59968 - 2.07063I$	$-10.17942 + 3.44207I$
$u = 0.980072 - 0.125353I$ $a = -0.254801 - 0.853262I$ $b = 0.0019611 - 0.1375350I$	$-6.59968 + 2.07063I$	$-10.17942 - 3.44207I$
$u = -0.883829 + 0.417064I$ $a = 0.191263 - 0.430849I$ $b = -0.45269 + 1.49682I$	$-0.415899 - 0.536043I$	$-5.84908 - 0.73218I$
$u = -0.883829 - 0.417064I$ $a = 0.191263 + 0.430849I$ $b = -0.45269 - 1.49682I$	$-0.415899 + 0.536043I$	$-5.84908 + 0.73218I$
$u = 0.721176 + 0.745223I$ $a = -0.306408 - 0.437171I$ $b = -0.615178 - 0.374615I$	$-3.19793 - 2.89851I$	$-4.48899 + 2.98394I$
$u = 0.721176 - 0.745223I$ $a = -0.306408 + 0.437171I$ $b = -0.615178 + 0.374615I$	$-3.19793 + 2.89851I$	$-4.48899 - 2.98394I$
$u = -0.873383 + 0.842744I$ $a = 1.33936 - 0.47440I$ $b = -0.280202 + 1.069330I$	$0.09981 + 6.03347I$	$-4.14327 - 5.94076I$
$u = -0.873383 - 0.842744I$ $a = 1.33936 + 0.47440I$ $b = -0.280202 - 1.069330I$	$0.09981 - 6.03347I$	$-4.14327 + 5.94076I$
$u = -0.733082 + 1.003360I$ $a = -1.197230 - 0.086134I$ $b = 0.329880 - 1.155840I$	$4.10073 + 4.32255I$	$9.22324 - 6.95697I$
$u = -0.733082 - 1.003360I$ $a = -1.197230 + 0.086134I$ $b = 0.329880 + 1.155840I$	$4.10073 - 4.32255I$	$9.22324 + 6.95697I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.513554 + 0.508562I$ $a = -1.46147 + 0.08500I$ $b = \ 1.217480 - 0.203390I$	$1.57157 - 2.98895I$	$-2.54492 + 10.78858I$
$u = \ 0.513554 - 0.508562I$ $a = -1.46147 - 0.08500I$ $b = \ 1.217480 + 0.203390I$	$1.57157 + 2.98895I$	$-2.54492 - 10.78858I$
$u = \ 0.202040 + 0.497945I$ $a = \ 1.11503 - 1.20840I$ $b = -1.59866 + 0.17694I$	$-0.83707 - 1.49732I$	$2.82304 + 4.42908I$
$u = \ 0.202040 - 0.497945I$ $a = \ 1.11503 + 1.20840I$ $b = -1.59866 - 0.17694I$	$-0.83707 + 1.49732I$	$2.82304 - 4.42908I$
$u = \ 1.09074 + 0.99503I$ $a = \ 0.667540 - 0.161912I$ $b = -1.188770 - 0.122000I$	$-5.87774 - 7.28194I$	$-11.41997 + 4.89321I$
$u = \ 1.09074 - 0.99503I$ $a = \ 0.667540 + 0.161912I$ $b = -1.188770 + 0.122000I$	$-5.87774 + 7.28194I$	$-11.41997 - 4.89321I$
$u = -0.182604 + 0.449273I$ $a = \ 2.81934 - 2.52595I$ $b = \ 1.46839 + 0.16039I$	$-11.87780 - 4.74158I$	$-6.58188 + 4.42115I$
$u = -0.182604 - 0.449273I$ $a = \ 2.81934 + 2.52595I$ $b = \ 1.46839 - 0.16039I$	$-11.87780 + 4.74158I$	$-6.58188 - 4.42115I$
$u = -5.66937$ $a = \ 0.174752$ $b = -5.76445$	-3.27992	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{19}-15u^{18}+\cdots+6u-1)(u^{58}+4u^{57}+\cdots+36890u+11033)$
c_2	$(u^{19}-4u^{18}+\cdots+6u-1)(u^{58}-3u^{57}+\cdots+14u+29)$
c_3	$(u^{19}+2u^{18}+\cdots+26u-11)(u^{58}-u^{57}+\cdots+3040u+373)$
c_4	$(u^{19}+7u^{17}+\cdots+3u+1)(u^{58}-u^{57}+\cdots-79133u+6037)$
c_5	$(u^{19}+6u^{18}+\cdots+10u+3)(u^{58}-u^{57}+\cdots+226u+299)$
c_6	$(u^{19}+4u^{18}+\cdots-2u+1)(u^{58}-u^{57}+\cdots-102u+17)$
c_7	$(u^{19}+u^{18}+\cdots+7u-1)(u^{58}-u^{56}+\cdots-77u+67)$
c_8	$(u^{19}+2u^{18}+\cdots-2u-1)(u^{58}-u^{57}+\cdots-318u+37)$
c_9	$(u^{19}+10u^{17}+\cdots+3u-1)(u^{58}-u^{57}+\cdots+597u+301)$
c_{10}	$(u^{19}-6u^{18}+\cdots+10u-3)(u^{58}-u^{57}+\cdots+226u+299)$
c_{11}, c_{12}	$(u^{19}-u^{18}+\cdots+7u+1)(u^{58}-u^{56}+\cdots-77u+67)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{19} - 41y^{18} + \cdots - 10y - 1)$ $\cdot (y^{58} - 70y^{57} + \cdots + 4940625850y + 121727089)$
c_2	$(y^{19} + 12y^{17} + \cdots + 46y - 1)(y^{58} + 11y^{57} + \cdots + 23062y + 841)$
c_3	$(y^{19} - 22y^{18} + \cdots + 698y - 121)$ $\cdot (y^{58} - 67y^{57} + \cdots - 4505246y + 139129)$
c_4	$(y^{19} + 14y^{18} + \cdots + 65y - 1)$ $\cdot (y^{58} + 97y^{57} + \cdots - 269971117y + 36445369)$
c_5, c_{10}	$(y^{19} - 10y^{18} + \cdots - 86y - 9)(y^{58} + 77y^{57} + \cdots + 6195034y + 89401)$
c_6	$(y^{19} - 34y^{18} + \cdots - 8y - 1)(y^{58} - 7y^{57} + \cdots - 11084y + 289)$
c_7, c_{11}, c_{12}	$(y^{19} + 11y^{18} + \cdots + 21y - 1)(y^{58} - 2y^{57} + \cdots - 22277y + 4489)$
c_8	$(y^{19} + 8y^{18} + \cdots - 14y - 1)(y^{58} - 13y^{57} + \cdots - 27050y + 1369)$
c_9	$(y^{19} + 20y^{18} + \cdots + 25y - 1)(y^{58} + 39y^{57} + \cdots + 3573447y + 90601)$