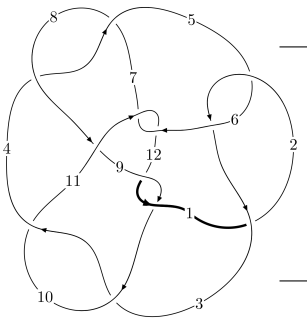
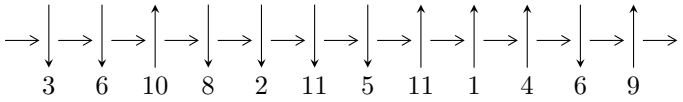
$12n_{0517}$ $(K12n_{0517})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 2.59090 \times 10^{123} u^{69} - 1.74742 \times 10^{122} u^{68} + \cdots + 5.02254 \times 10^{123} b + 2.90544 \times 10^{125},$$
$$- 2.56644 \times 10^{125} u^{69} + 1.38382 \times 10^{124} u^{68} + \cdots + 1.19537 \times 10^{125} a - 2.88247 \times 10^{127},$$
$$u^{70} + u^{69} + \cdots + 167u + 119 \rangle$$
$$I_2^u = \langle u^{19} - 11u^{17} + \cdots + b + 4u,\ -u^{17} + 10u^{15} + \cdots + a - 1,\ u^{20} - 12u^{18} + \cdots - 4u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 90 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. $\boldsymbol{I_1^u = \langle 2.59 \times 10^{123} u^{69} - 1.75 \times 10^{122} u^{68} + \cdots + 5.02 \times 10^{123} b + 2.91 \times 10^{125},\ -2.57 \times 10^{125} u^{69} + 1.38 \times 10^{124} u^{68} + \cdots + 1.20 \times 10^{125} a - 2.88 \times 10^{127},\ u^{70} + u^{69} + \cdots + 167u + 119 \rangle}$

(i) Arc colorings

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

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

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

$$a_6 = \begin{pmatrix} 2.14699u^{69} - 0.115765u^{68} + \cdots + 107.714u + 241.137 \\ -0.515855u^{69} + 0.0347916u^{68} + \cdots - 26.3006u - 57.8481 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 2.48131u^{69} - 0.149289u^{68} + \cdots + 124.761u + 277.011 \\ -0.586466u^{69} + 0.0388864u^{68} + \cdots - 30.8994u - 65.7480 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.60207u^{69} + 0.0880802u^{68} + \cdots - 76.1759u - 177.582 \\ 0.685277u^{69} - 0.0402039u^{68} + \cdots + 34.8200u + 76.6862 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.916797u^{69} + 0.0478763u^{68} + \cdots - 41.3559u - 100.896 \\ 0.685277u^{69} - 0.0402039u^{68} + \cdots + 34.8200u + 76.6862 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.07887u^{69} - 0.0702660u^{68} + \cdots + 57.0307u + 120.856 \\ 0.0814787u^{69} + 0.00137789u^{68} + \cdots + 3.35624u + 10.5249 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.674424u^{69} - 0.0312906u^{68} + \cdots + 30.0286u + 74.7526 \\ -0.0263865u^{69} - 0.00119856u^{68} + \cdots + 0.797097u - 2.27910 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.619496u^{69} - 0.0200100u^{68} + \cdots + 25.8813u + 68.2796 \\ -0.00908482u^{69} - 0.0135532u^{68} + \cdots + 1.17023u - 0.873214 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.58425u^{69} + 0.0976078u^{68} + \cdots - 82.4818u - 179.510 \\ 0.515765u^{69} - 0.0286416u^{68} + \cdots + 28.2421u + 57.9908 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3.84455u^{69} + 0.214348u^{68} + \cdots - 176.947u - 438.096$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{70}+37u^{69}+\cdots+12u+1$
c_2, c_5	$u^{70}+u^{69}+\cdots+2u+1$
c_3, c_{10}	$u^{70}+u^{69}+\cdots+167u+119$
c_4, c_7	$u^{70}-2u^{69}+\cdots-22u+47$
c_6, c_{11}	$u^{70}+3u^{69}+\cdots+7369u+589$
c_8	$u^{70}+5u^{69}+\cdots-20478u+1117$
c_9, c_{12}	$u^{70}-3u^{69}+\cdots-379u+71$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{70}+7y^{69}+\cdots+132y+1$
c_2, c_5	$y^{70}-37y^{69}+\cdots-12y+1$
c_3, c_{10}	$y^{70}-67y^{69}+\cdots-100955y+14161$
c_4, c_7	$y^{70}+26y^{69}+\cdots+56950y+2209$
c_6, c_{11}	$y^{70}-51y^{69}+\cdots-7893673y+346921$
c_8	$y^{70}+13y^{69}+\cdots-1909946y+1247689$
c_9, c_{12}	$y^{70}-39y^{69}+\cdots+159529y+5041$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.162942 + 0.992734I$ $a = -0.526812 - 0.555218I$ $b = -1.128030 + 0.561542I$	$-4.48127 + 4.09578I$	0
$u = \quad 0.162942 - 0.992734I$ $a = -0.526812 + 0.555218I$ $b = -1.128030 - 0.561542I$	$-4.48127 - 4.09578I$	0
$u = -0.587410 + 0.760416I$ $a = -1.068560 + 0.458240I$ $b = -0.710294 - 0.340326I$	$-0.736963 + 0.674108I$	0
$u = -0.587410 - 0.760416I$ $a = -1.068560 - 0.458240I$ $b = -0.710294 + 0.340326I$	$-0.736963 - 0.674108I$	0
$u = \quad 0.260207 + 0.914917I$ $a = -0.512081 - 0.446654I$ $b = -0.852333 - 0.420136I$	$2.36112 - 1.77812I$	0
$u = \quad 0.260207 - 0.914917I$ $a = -0.512081 + 0.446654I$ $b = -0.852333 + 0.420136I$	$2.36112 + 1.77812I$	0
$u = -1.057580 + 0.004969I$ $a = -0.17447 + 2.35938I$ $b = \quad 0.714189 - 0.522373I$	$-0.22585 + 2.80688I$	0
$u = -1.057580 - 0.004969I$ $a = -0.17447 - 2.35938I$ $b = \quad 0.714189 + 0.522373I$	$-0.22585 - 2.80688I$	0
$u = -1.026770 + 0.280884I$ $a = \quad 0.334154 - 0.106289I$ $b = -1.41951 + 0.14300I$	$-4.19560 + 0.59854I$	0
$u = -1.026770 - 0.280884I$ $a = \quad 0.334154 + 0.106289I$ $b = -1.41951 - 0.14300I$	$-4.19560 - 0.59854I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.358150 + 1.054780I$ $a = 0.497432 + 0.636293I$ $b = 1.155510 - 0.571979I$	$-3.66192 + 10.54230I$	0
$u = 0.358150 - 1.054780I$ $a = 0.497432 - 0.636293I$ $b = 1.155510 + 0.571979I$	$-3.66192 - 10.54230I$	0
$u = -1.047030 + 0.481909I$ $a = 0.975032 - 0.983126I$ $b = 0.489259 + 0.339253I$	$0.42197 - 4.87071I$	0
$u = -1.047030 - 0.481909I$ $a = 0.975032 + 0.983126I$ $b = 0.489259 - 0.339253I$	$0.42197 + 4.87071I$	0
$u = -0.408614 + 0.731960I$ $a = 0.423060 + 0.429280I$ $b = 0.245639 - 0.809125I$	$-1.03432 - 5.43336I$	$0.32914 + 5.23361I$
$u = -0.408614 - 0.731960I$ $a = 0.423060 - 0.429280I$ $b = 0.245639 + 0.809125I$	$-1.03432 + 5.43336I$	$0.32914 - 5.23361I$
$u = -1.201710 + 0.128261I$ $a = 0.52282 - 2.12440I$ $b = -0.607963 + 0.436429I$	$0.56341 - 3.78229I$	0
$u = -1.201710 - 0.128261I$ $a = 0.52282 + 2.12440I$ $b = -0.607963 - 0.436429I$	$0.56341 + 3.78229I$	0
$u = -0.275586 + 0.695762I$ $a = 0.24228 - 1.51253I$ $b = 1.221590 + 0.294817I$	$-6.37463 - 4.14439I$	$-6.36331 + 4.51180I$
$u = -0.275586 - 0.695762I$ $a = 0.24228 + 1.51253I$ $b = 1.221590 - 0.294817I$	$-6.37463 + 4.14439I$	$-6.36331 - 4.51180I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.265140 + 0.097957I$ $a = -0.273902 - 1.370370I$ $b = -1.198590 + 0.510986I$	$5.45930 + 2.61096I$	0
$u = 1.265140 - 0.097957I$ $a = -0.273902 + 1.370370I$ $b = -1.198590 - 0.510986I$	$5.45930 - 2.61096I$	0
$u = -0.149406 + 0.715223I$ $a = -0.538311 - 0.502735I$ $b = -0.251933 + 0.713035I$	$-2.04923 + 0.75692I$	$-2.25190 - 0.59358I$
$u = -0.149406 - 0.715223I$ $a = -0.538311 + 0.502735I$ $b = -0.251933 - 0.713035I$	$-2.04923 - 0.75692I$	$-2.25190 + 0.59358I$
$u = -1.298540 + 0.175170I$ $a = -0.570275 + 0.268495I$ $b = 1.60944 - 0.20167I$	$-2.09036 - 4.20016I$	0
$u = -1.298540 - 0.175170I$ $a = -0.570275 - 0.268495I$ $b = 1.60944 + 0.20167I$	$-2.09036 + 4.20016I$	0
$u = 0.646226 + 0.217967I$ $a = -0.526529 - 0.590917I$ $b = 0.204273 + 0.374685I$	$1.194110 + 0.658977I$	$5.37455 - 1.65683I$
$u = 0.646226 - 0.217967I$ $a = -0.526529 + 0.590917I$ $b = 0.204273 - 0.374685I$	$1.194110 - 0.658977I$	$5.37455 + 1.65683I$
$u = -1.306510 + 0.216293I$ $a = 0.21558 + 1.96906I$ $b = -0.998153 - 0.908859I$	$8.43098 - 5.62723I$	0
$u = -1.306510 - 0.216293I$ $a = 0.21558 - 1.96906I$ $b = -0.998153 + 0.908859I$	$8.43098 + 5.62723I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.542381+0.399358I$ $a=1.25802-1.62036I$ $b=0.912515+0.347188I$	$-0.46038-3.54414I$	$-1.55532+8.51020I$
$u=-0.542381-0.399358I$ $a=1.25802+1.62036I$ $b=0.912515-0.347188I$	$-0.46038+3.54414I$	$-1.55532-8.51020I$
$u=1.283520+0.392498I$ $a=0.251934+1.120160I$ $b=1.187610-0.547691I$	$5.76596+6.53404I$	0
$u=1.283520-0.392498I$ $a=0.251934-1.120160I$ $b=1.187610+0.547691I$	$5.76596-6.53404I$	0
$u=1.199560+0.602314I$ $a=-0.428332-0.050852I$ $b=1.028560+0.413497I$	$-1.34620+1.52607I$	0
$u=1.199560-0.602314I$ $a=-0.428332+0.050852I$ $b=1.028560-0.413497I$	$-1.34620-1.52607I$	0
$u=1.054730+0.838026I$ $a=0.220170-0.062594I$ $b=-0.972698-0.437995I$	$-1.67691-4.10730I$	0
$u=1.054730-0.838026I$ $a=0.220170+0.062594I$ $b=-0.972698+0.437995I$	$-1.67691+4.10730I$	0
$u=1.344190+0.102651I$ $a=0.89673+1.29535I$ $b=-0.868924-1.038020I$	$8.88504-1.38023I$	0
$u=1.344190-0.102651I$ $a=0.89673-1.29535I$ $b=-0.868924+1.038020I$	$8.88504+1.38023I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.340120 + 0.269926I$ $a = -0.92144 + 1.59073I$ $b = 0.981639 - 0.519310I$	$-1.13757 + 1.42679I$	0
$u = 1.340120 - 0.269926I$ $a = -0.92144 - 1.59073I$ $b = 0.981639 + 0.519310I$	$-1.13757 - 1.42679I$	0
$u = 1.341050 + 0.289401I$ $a = -0.635108 - 1.174990I$ $b = 0.484189 + 1.015180I$	$2.62724 + 2.87361I$	0
$u = 1.341050 - 0.289401I$ $a = -0.635108 + 1.174990I$ $b = 0.484189 - 1.015180I$	$2.62724 - 2.87361I$	0
$u = -0.400487 + 0.438177I$ $a = -0.921915 + 0.093140I$ $b = -0.728854 + 0.148303I$	$-1.256590 + 0.357225I$	$-7.27517 + 0.18626I$
$u = -0.400487 - 0.438177I$ $a = -0.921915 - 0.093140I$ $b = -0.728854 - 0.148303I$	$-1.256590 - 0.357225I$	$-7.27517 - 0.18626I$
$u = -0.119971 + 0.563177I$ $a = -0.09431 + 1.68398I$ $b = -1.290550 - 0.275222I$	$-5.81925 + 1.72254I$	$-6.10737 - 2.59063I$
$u = -0.119971 - 0.563177I$ $a = -0.09431 - 1.68398I$ $b = -1.290550 + 0.275222I$	$-5.81925 - 1.72254I$	$-6.10737 + 2.59063I$
$u = -1.46008 + 0.13032I$ $a = 0.051187 + 0.556347I$ $b = 0.076948 - 0.671711I$	$8.76387 - 1.80793I$	0
$u = -1.46008 - 0.13032I$ $a = 0.051187 - 0.556347I$ $b = 0.076948 + 0.671711I$	$8.76387 + 1.80793I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.40292+0.42870I$ $a=-0.07992-1.66606I$ $b=\ \ 1.178830+0.716037I$	$0.46915-9.15994I$	0
$u=-1.40292-0.42870I$ $a=-0.07992+1.66606I$ $b=\ \ 1.178830-0.716037I$	$0.46915+9.15994I$	0
$u=\ \ 1.44300+0.29103I$ $a=\ \ 0.74349-1.68648I$ $b=-1.021850+0.498295I$	$-0.81406+7.77590I$	0
$u=\ \ 1.44300-0.29103I$ $a=\ \ 0.74349+1.68648I$ $b=-1.021850-0.498295I$	$-0.81406-7.77590I$	0
$u=\ \ 1.47157+0.29756I$ $a=\ \ 0.501696+1.251770I$ $b=-0.387022-1.144810I$	$4.98777+9.24338I$	0
$u=\ \ 1.47157-0.29756I$ $a=\ \ 0.501696-1.251770I$ $b=-0.387022+1.144810I$	$4.98777-9.24338I$	0
$u=\ \ 1.52784+0.12654I$ $a=\ \ 0.09189-1.46031I$ $b=-1.140390+0.501960I$	$6.37959+5.48541I$	0
$u=\ \ 1.52784-0.12654I$ $a=\ \ 0.09189+1.46031I$ $b=-1.140390-0.501960I$	$6.37959-5.48541I$	0
$u=-0.036904+0.432180I$ $a=\ \ 0.875519+0.275342I$ $b=\ \ 0.904712-0.843485I$	$4.36453+3.13122I$	$-8.73522-5.59654I$
$u=-0.036904-0.432180I$ $a=\ \ 0.875519-0.275342I$ $b=\ \ 0.904712+0.843485I$	$4.36453-3.13122I$	$-8.73522+5.59654I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.51010+0.42006I$ $a=\ \ 0.13045+1.56613I$ $b=-1.24589-0.71543I$	$2.2947-15.8377I$	0
$u=-1.51010-0.42006I$ $a=\ \ 0.13045-1.56613I$ $b=-1.24589+0.71543I$	$2.2947+15.8377I$	0
$u=\ \ 1.58659+0.21199I$ $a=-0.123175+1.118740I$ $b=\ \ 1.146000-0.542754I$	$6.61081+2.90666I$	0
$u=\ \ 1.58659-0.21199I$ $a=-0.123175-1.118740I$ $b=\ \ 1.146000+0.542754I$	$6.61081-2.90666I$	0
$u=-1.60871+0.02945I$ $a=\ \ 0.541754-0.550692I$ $b=-0.291751+0.192601I$	$9.05325-1.52708I$	0
$u=-1.60871-0.02945I$ $a=\ \ 0.541754+0.550692I$ $b=-0.291751-0.192601I$	$9.05325+1.52708I$	0
$u=-1.64274+0.01405I$ $a=-0.014479-0.737286I$ $b=\ \ 0.224356+0.463466I$	$9.17388-1.53079I$	0
$u=-1.64274-0.01405I$ $a=-0.014479+0.737286I$ $b=\ \ 0.224356-0.463466I$	$9.17388+1.53079I$	0
$u=\ \ 0.298614+0.147930I$ $a=-2.04425+3.28230I$ $b=\ \ 0.849476+0.355840I$	$2.19229-1.58613I$	$8.62350+3.92336I$
$u=\ \ 0.298614-0.147930I$ $a=-2.04425-3.28230I$ $b=\ \ 0.849476-0.355840I$	$2.19229+1.58613I$	$8.62350-3.92336I$

II. $I_2^u =$
$\langle u^{19}-11u^{17}+\cdots+b+4u,\ -u^{17}+10u^{15}+\cdots+a-1,\ u^{20}-12u^{18}+\cdots-4u+1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u^{17}-10u^{15}+\cdots-8u+1\\-u^{19}+11u^{17}+\cdots+2u^2-4u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u^{15}+10u^{13}+\cdots-8u+1\\u^{17}-10u^{15}+\cdots+3u^2-4u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-u^{19}+11u^{17}+\cdots-7u+3\\u^{17}-10u^{15}+\cdots-6u+1\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^{19}+12u^{17}+\cdots-13u+4\\u^{17}-10u^{15}+\cdots-6u+1\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u^{19}+12u^{17}+\cdots-7u-2\\u^{16}-9u^{14}+\cdots+u-2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u^{19}-12u^{17}+\cdots+14u-4\\u^{19}-11u^{17}+\cdots+7u-1\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-2u^{17}+20u^{15}+\cdots+14u-4\\2u^{19}-21u^{17}+\cdots+6u-1\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}u^5-3u^3+2u\\u^4-u^3-2u^2+2u\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4u^{17}-2u^{16}+40u^{15}+17u^{14}-168u^{13}-57u^{12}+386u^{11}+87u^{10}-529u^9-34u^8+432u^7-70u^6-182u^5+98u^4+13u^3-46u^2+14u+6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 14u^{19} + \cdots - 17u + 1$
c_2	$u^{20} - 7u^{18} + \cdots + u + 1$
c_3	$u^{20} - 12u^{18} + \cdots - 4u + 1$
c_4	$u^{20} - 3u^{19} + \cdots - 3u + 1$
c_5	$u^{20} - 7u^{18} + \cdots - u + 1$
c_6	$u^{20} - 2u^{18} + \cdots - 8u + 1$
c_7	$u^{20} + 3u^{19} + \cdots + 3u + 1$
c_8	$u^{20} + 3u^{17} + \cdots + 65u + 25$
c_9	$u^{20} - 4u^{19} + \cdots + 2u^2 + 1$
c_{10}	$u^{20} - 12u^{18} + \cdots + 4u + 1$
c_{11}	$u^{20} - 2u^{18} + \cdots + 8u + 1$
c_{12}	$u^{20} + 4u^{19} + \cdots + 2u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} - 2y^{19} + \cdots - 13y + 1$
c_2, c_5	$y^{20} - 14y^{19} + \cdots - 17y + 1$
c_3, c_{10}	$y^{20} - 24y^{19} + \cdots + 8y + 1$
c_4, c_7	$y^{20} + 13y^{19} + \cdots + 17y + 1$
c_6, c_{11}	$y^{20} - 4y^{19} + \cdots - 38y + 1$
c_8	$y^{20} + 32y^{18} + \cdots + 14925y + 625$
c_9, c_{12}	$y^{20} - 16y^{19} + \cdots + 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.783854 + 0.449976I$ $a = 0.88225 + 1.46027I$ $b = 0.607925 + 0.053893I$	$-1.21478 - 1.69741I$	$-5.21357 + 2.91826I$
$u = 0.783854 - 0.449976I$ $a = 0.88225 - 1.46027I$ $b = 0.607925 - 0.053893I$	$-1.21478 + 1.69741I$	$-5.21357 - 2.91826I$
$u = -0.834972 + 0.271757I$ $a = -0.402769 + 0.469015I$ $b = 1.336280 - 0.001110I$	$-4.22306 + 1.50916I$	$-0.90565 - 4.60792I$
$u = -0.834972 - 0.271757I$ $a = -0.402769 - 0.469015I$ $b = 1.336280 + 0.001110I$	$-4.22306 - 1.50916I$	$-0.90565 + 4.60792I$
$u = -1.097540 + 0.232712I$ $a = 0.824240 - 0.456164I$ $b = -1.364360 + 0.107526I$	$-3.24781 - 3.48078I$	$-2.45496 + 2.40562I$
$u = -1.097540 - 0.232712I$ $a = 0.824240 + 0.456164I$ $b = -1.364360 - 0.107526I$	$-3.24781 + 3.48078I$	$-2.45496 - 2.40562I$
$u = 1.076770 + 0.366665I$ $a = -0.91092 - 1.73477I$ $b = -0.617101 + 0.196016I$	$-0.19696 + 4.79433I$	$-7.00908 - 7.37935I$
$u = 1.076770 - 0.366665I$ $a = -0.91092 + 1.73477I$ $b = -0.617101 - 0.196016I$	$-0.19696 - 4.79433I$	$-7.00908 + 7.37935I$
$u = 0.202370 + 0.595132I$ $a = 0.51038 + 1.43333I$ $b = 0.911128 + 0.340957I$	$1.59110 - 1.41451I$	$-5.95128 - 0.67158I$
$u = 0.202370 - 0.595132I$ $a = 0.51038 - 1.43333I$ $b = 0.911128 - 0.340957I$	$1.59110 + 1.41451I$	$-5.95128 + 0.67158I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.407250 + 0.133915I$ $a = -0.22271 + 1.63206I$ $b = 1.135860 - 0.806663I$	$9.26854 + 4.51233I$	$6.25147 - 2.40036I$
$u = 1.407250 - 0.133915I$ $a = -0.22271 - 1.63206I$ $b = 1.135860 + 0.806663I$	$9.26854 - 4.51233I$	$6.25147 + 2.40036I$
$u = 1.49226 + 0.19871I$ $a = -0.104580 - 1.177260I$ $b = -1.176570 + 0.447055I$	$6.50658 + 4.39997I$	$3.95982 - 2.84697I$
$u = 1.49226 - 0.19871I$ $a = -0.104580 + 1.177260I$ $b = -1.176570 - 0.447055I$	$6.50658 - 4.39997I$	$3.95982 + 2.84697I$
$u = -1.52078 + 0.07559I$ $a = -0.645514 + 1.015480I$ $b = 0.640462 - 0.853286I$	$10.74570 + 1.73917I$	$8.18415 - 2.81379I$
$u = -1.52078 - 0.07559I$ $a = -0.645514 - 1.015480I$ $b = 0.640462 + 0.853286I$	$10.74570 - 1.73917I$	$8.18415 + 2.81379I$
$u = -1.64381 + 0.07647I$ $a = 0.690763 - 0.401595I$ $b = -0.564885 + 0.278244I$	$8.89603 - 1.12476I$	$-0.70439 - 8.32969I$
$u = -1.64381 - 0.07647I$ $a = 0.690763 + 0.401595I$ $b = -0.564885 - 0.278244I$	$8.89603 + 1.12476I$	$-0.70439 + 8.32969I$
$u = 0.134600 + 0.262014I$ $a = -0.62114 - 1.47786I$ $b = -0.908744 - 0.795002I$	$4.77332 - 2.98706I$	$9.34349 + 0.03679I$
$u = 0.134600 - 0.262014I$ $a = -0.62114 + 1.47786I$ $b = -0.908744 + 0.795002I$	$4.77332 + 2.98706I$	$9.34349 - 0.03679I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{20}-14u^{19}+\cdots-17u+1)(u^{70}+37u^{69}+\cdots+12u+1)$
c_2	$(u^{20}-7u^{18}+\cdots+u+1)(u^{70}+u^{69}+\cdots+2u+1)$
c_3	$(u^{20}-12u^{18}+\cdots-4u+1)(u^{70}+u^{69}+\cdots+167u+119)$
c_4	$(u^{20}-3u^{19}+\cdots-3u+1)(u^{70}-2u^{69}+\cdots-22u+47)$
c_5	$(u^{20}-7u^{18}+\cdots-u+1)(u^{70}+u^{69}+\cdots+2u+1)$
c_6	$(u^{20}-2u^{18}+\cdots-8u+1)(u^{70}+3u^{69}+\cdots+7369u+589)$
c_7	$(u^{20}+3u^{19}+\cdots+3u+1)(u^{70}-2u^{69}+\cdots-22u+47)$
c_8	$(u^{20}+3u^{17}+\cdots+65u+25)(u^{70}+5u^{69}+\cdots-20478u+1117)$
c_9	$(u^{20}-4u^{19}+\cdots+2u^2+1)(u^{70}-3u^{69}+\cdots-379u+71)$
c_{10}	$(u^{20}-12u^{18}+\cdots+4u+1)(u^{70}+u^{69}+\cdots+167u+119)$
c_{11}	$(u^{20}-2u^{18}+\cdots+8u+1)(u^{70}+3u^{69}+\cdots+7369u+589)$
c_{12}	$(u^{20}+4u^{19}+\cdots+2u^2+1)(u^{70}-3u^{69}+\cdots-379u+71)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{20}-2y^{19}+\cdots-13y+1)(y^{70}+7y^{69}+\cdots+132y+1)$
c_2, c_5	$(y^{20}-14y^{19}+\cdots-17y+1)(y^{70}-37y^{69}+\cdots-12y+1)$
c_3, c_{10}	$(y^{20}-24y^{19}+\cdots+8y+1)(y^{70}-67y^{69}+\cdots-100955y+14161)$
c_4, c_7	$(y^{20}+13y^{19}+\cdots+17y+1)(y^{70}+26y^{69}+\cdots+56950y+2209)$
c_6, c_{11}	$(y^{20}-4y^{19}+\cdots-38y+1)(y^{70}-51y^{69}+\cdots-7893673y+346921)$
c_8	$(y^{20}+32y^{18}+\cdots+14925y+625)$ $\cdot(y^{70}+13y^{69}+\cdots-1909946y+1247689)$
c_9, c_{12}	$(y^{20}-16y^{19}+\cdots+4y+1)(y^{70}-39y^{69}+\cdots+159529y+5041)$