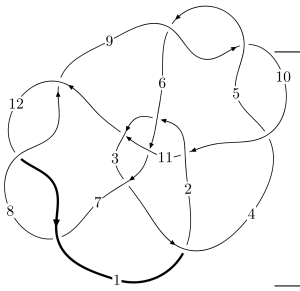
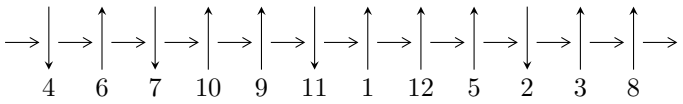
$12a_{0883}$ $(K12a_{0883})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 161211550u^{26} + 163067087u^{25} + \cdots + 168567233b + 184311963,$$
$$\quad -64532319u^{26} - 105037379u^{25} + \cdots + 168567233a - 400814896,\ u^{27} + u^{26} + \cdots + 2u - 1\rangle$$
$$I_2^u = \langle 8.05343 \times 10^{231}u^{97} - 2.98534 \times 10^{231}u^{96} + \cdots + 7.84596 \times 10^{231}b - 9.54856 \times 10^{232},$$
$$\quad 1.36459 \times 10^{233}u^{97} - 1.17790 \times 10^{233}u^{96} + \cdots + 7.84596 \times 10^{231}a - 1.42631 \times 10^{234},\ u^{98} - u^{97} + \cdots - 36u$$
$$I_3^u = \langle u^4 + u^3 + 2u^2 + b + 2u,\ -u^6 - 2u^4 - u^3 + u^2 + a - u + 1,\ u^7 + u^6 + 4u^5 + 5u^4 + 5u^3 + 6u^2 + 2u + 1\rangle$$
$$I_4^u = \langle 4u^{25} - 11u^{24} + \cdots + b - 3,\ 5u^{25} - 13u^{24} + \cdots + a + 4,\ u^{26} - 2u^{25} + \cdots - 2u + 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 158 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.

$\boldsymbol{I_1^u = \langle 1.61\times 10^8 u^{26} + 1.63\times 10^8 u^{25} + \cdots + 1.69\times 10^8 b + 1.84\times 10^8,\ -6.45\times 10^7 u^{26} - 1.05\times 10^8 u^{25} + \cdots + 1.69\times 10^8 a - 4.01\times 10^8,\ u^{27} + u^{26} + \cdots + 2u - 1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0.382828u^{26} + 0.623119u^{25} + \cdots + 2.47957u + 2.37777 \\ -0.956364u^{26} - 0.967371u^{25} + \cdots - 0.798674u - 1.09340 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 0.110178u^{26} + 0.0591229u^{25} + \cdots + 1.58315u + 1.52466 \\ -0.538924u^{26} - 0.745833u^{25} + \cdots - 1.10871u - 0.802058 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -0.959060u^{26} - 1.36051u^{25} + \cdots + 0.0254923u - 2.73531 \\ -0.00114729u^{26} + 0.449549u^{25} + \cdots + 1.51778u + 0.626626 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u^3 - 2u \\ 0.576586u^{26} + 1.01727u^{25} + \cdots + 1.09757u + 0.898510 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1 \\ 0.469768u^{26} + 0.828129u^{25} + \cdots + 1.88993u + 0.768115 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} u^2 + 1 \\ -0.428742u^{26} - 0.646967u^{25} + \cdots - 1.64298u - 1.12648 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u \\ 0.358361u^{26} + 0.317336u^{25} + \cdots + 0.828580u + 0.469768 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{314978218}{168567233}u^{26} - \frac{605025497}{168567233}u^{25} + \cdots - \frac{1917677278}{168567233}u + \frac{586286315}{168567233}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{27} - 7u^{26} + \cdots + 176u - 16$
c_2, c_{11}	$u^{27} + u^{26} + \cdots - 3u + 1$
c_3, c_{10}	$u^{27} + u^{26} + \cdots + 3u + 1$
c_4, c_5, c_7 c_8, c_9, c_{12}	$u^{27} - u^{26} + \cdots + 2u + 1$
c_6	$u^{27} - 16u^{26} + \cdots + 22u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{27} - 5y^{26} + \cdots + 5280y - 256$
c_2, c_{11}	$y^{27} - 7y^{26} + \cdots + 27y - 1$
c_3, c_{10}	$y^{27} - 7y^{26} + \cdots + 17y - 1$
c_4, c_5, c_7 c_8, c_9, c_{12}	$y^{27} + 25y^{26} + \cdots + 18y - 1$
c_6	$y^{27} - 10y^{26} + \cdots + 492y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.070166 + 0.997411I$ $a = 0.050375 + 0.136338I$ $b = 1.106230 + 0.535575I$	$-0.70818 + 3.60837I$	$2.50627 - 4.79457I$
$u = 0.070166 - 0.997411I$ $a = 0.050375 - 0.136338I$ $b = 1.106230 - 0.535575I$	$-0.70818 - 3.60837I$	$2.50627 + 4.79457I$
$u = -0.995972 + 0.202368I$ $a = -0.0990140 + 0.0471163I$ $b = 0.473624 + 0.134565I$	$-0.0498204 + 0.0658137I$	$13.3792 - 20.3584I$
$u = -0.995972 - 0.202368I$ $a = -0.0990140 - 0.0471163I$ $b = 0.473624 - 0.134565I$	$-0.0498204 - 0.0658137I$	$13.3792 + 20.3584I$
$u = 0.791226 + 0.513863I$ $a = -0.736086 + 0.718981I$ $b = -0.141477 - 0.624312I$	$-1.14567 + 9.89138I$	$2.32394 - 9.56251I$
$u = 0.791226 - 0.513863I$ $a = -0.736086 - 0.718981I$ $b = -0.141477 + 0.624312I$	$-1.14567 - 9.89138I$	$2.32394 + 9.56251I$
$u = -0.542866 + 0.539927I$ $a = 0.390658 - 0.702555I$ $b = -0.0570518 + 0.0874559I$	$1.32847 - 1.67905I$	$10.52150 + 4.30869I$
$u = -0.542866 - 0.539927I$ $a = 0.390658 + 0.702555I$ $b = -0.0570518 - 0.0874559I$	$1.32847 + 1.67905I$	$10.52150 - 4.30869I$
$u = -0.122477 + 1.262950I$ $a = -1.31674 - 1.34075I$ $b = -1.11217 - 2.28394I$	$-9.69201 - 3.22381I$	$-6.38040 + 1.87892I$
$u = -0.122477 - 1.262950I$ $a = -1.31674 + 1.34075I$ $b = -1.11217 + 2.28394I$	$-9.69201 + 3.22381I$	$-6.38040 - 1.87892I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.230598 + 1.267870I$ $a = -0.39953 + 1.81101I$ $b = -0.47291 + 2.86023I$	$-7.30514 + 6.01759I$	$-0.32733 - 7.30981I$
$u = \ 0.230598 - 1.267870I$ $a = -0.39953 - 1.81101I$ $b = -0.47291 - 2.86023I$	$-7.30514 - 6.01759I$	$-0.32733 + 7.30981I$
$u = \ 0.204690 + 1.330900I$ $a = -0.26598 + 1.62179I$ $b = -0.47881 + 1.96936I$	$-7.82612 + 5.05552I$	$-1.17987 - 2.39455I$
$u = \ 0.204690 - 1.330900I$ $a = -0.26598 - 1.62179I$ $b = -0.47881 - 1.96936I$	$-7.82612 - 5.05552I$	$-1.17987 + 2.39455I$
$u = -0.179338 + 1.344090I$ $a = -0.04177 - 2.74708I$ $b = \ 0.38158 - 3.28794I$	$-8.31053 - 8.16537I$	$-3.33517 + 11.01444I$
$u = -0.179338 - 1.344090I$ $a = -0.04177 + 2.74708I$ $b = \ 0.38158 + 3.28794I$	$-8.31053 + 8.16537I$	$-3.33517 - 11.01444I$
$u = -0.603103$ $a = \ 2.07379$ $b = \ 0.171319$	0.515822	11.7560
$u = \ 0.01958 + 1.42133I$ $a = \ 0.704503 + 0.398347I$ $b = -0.235482 + 0.318924I$	$-6.81655 + 2.85614I$	$-2.29662 - 2.94714I$
$u = \ 0.01958 - 1.42133I$ $a = \ 0.704503 - 0.398347I$ $b = -0.235482 - 0.318924I$	$-6.81655 - 2.85614I$	$-2.29662 + 2.94714I$
$u = -0.473384$ $a = \ 1.02334$ $b = \ 0.321318$	0.921050	10.8530

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.375751 + 0.179645I$ $a = 0.80850 - 1.25731I$ $b = 0.727471 + 0.972773I$	$1.25767 + 3.71987I$	$13.1792 - 10.4060I$
$u = 0.375751 - 0.179645I$ $a = 0.80850 + 1.25731I$ $b = 0.727471 - 0.972773I$	$1.25767 - 3.71987I$	$13.1792 + 10.4060I$
$u = -0.32805 + 1.55024I$ $a = 0.08115 + 1.75485I$ $b = -0.33517 + 2.81280I$	$-14.5174 - 18.3439I$	$-3.23925 + 8.58445I$
$u = -0.32805 - 1.55024I$ $a = 0.08115 - 1.75485I$ $b = -0.33517 - 2.81280I$	$-14.5174 + 18.3439I$	$-3.23925 - 8.58445I$
$u = 0.35424 + 1.56608I$ $a = 0.129600 - 1.020350I$ $b = -0.22137 - 1.77783I$	$-13.3669 + 10.0927I$	$-3.30444 - 7.62979I$
$u = 0.35424 - 1.56608I$ $a = 0.129600 + 1.020350I$ $b = -0.22137 + 1.77783I$	$-13.3669 - 10.0927I$	$-3.30444 + 7.62979I$
$u = 0.321408$ $a = 2.29153$ $b = -0.761575$	-2.01710	-4.30310

II. $I_2^u = \langle 8.05\times 10^{231}u^{97} - 2.99\times 10^{231}u^{96} + \cdots + 7.85\times 10^{231}b - 9.55\times 10^{232},\ 1.36\times 10^{233}u^{97} - 1.18\times 10^{233}u^{96} + \cdots + 7.85\times 10^{231}a - 1.43\times 10^{234},\ u^{98} - u^{97} + \cdots - 36u + 1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} -17.3923u^{97} + 15.0129u^{96} + \cdots - 4433.65u + 181.789 \\ -1.02644u^{97} + 0.380494u^{96} + \cdots - 235.466u + 12.1700 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -17.9778u^{97} + 15.8292u^{96} + \cdots - 4737.38u + 196.338 \\ -0.273211u^{97} + 0.251929u^{96} + \cdots - 244.360u + 12.4008 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -9.95056u^{97} + 8.64388u^{96} + \cdots - 2431.59u + 104.303 \\ 0.850940u^{97} - 0.650011u^{96} + \cdots + 280.898u - 11.5019 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -4.56522u^{97} + 3.03576u^{96} + \cdots - 694.079u + 32.8371 \\ 1.99051u^{97} - 2.57908u^{96} + \cdots + 546.222u - 22.8070 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -24.0010u^{97} + 22.2667u^{96} + \cdots - 7216.77u + 308.025 \\ -1.43913u^{97} + 1.65677u^{96} + \cdots - 365.233u + 18.0341 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -17.4547u^{97} + 15.3237u^{96} + \cdots - 4630.14u + 192.443 \\ -0.306071u^{97} + 0.126649u^{96} + \cdots - 242.535u + 12.3881 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -2.91621u^{97} + 2.48251u^{96} + \cdots - 1005.31u + 66.4486 \\ 4.29285u^{97} - 4.18123u^{96} + \cdots + 1267.97u - 52.9233 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6.62974u^{97} + 5.53191u^{96} + \cdots - 803.454u + 33.3318$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^{49}+8u^{48}+\cdots-u+139)^2$
c_2, c_{11}	$u^{98}-u^{97}+\cdots+78991u+5641$
c_3, c_{10}	$u^{98}-12u^{96}+\cdots-2731098u+1190927$
c_4, c_5, c_7 c_8, c_9, c_{12}	$u^{98}+u^{97}+\cdots+36u+1$
c_6	$(u^{49}+6u^{48}+\cdots+7u+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^{49} - 30y^{48} + \cdots - 378913y - 19321)^2$
c_2, c_{11}	$y^{98} + 23y^{97} + \cdots + 672079733y + 31820881$
c_3, c_{10}	$y^{98} - 24y^{97} + \cdots - 54241979206882y + 1418307119329$
c_4, c_5, c_7 c_8, c_9, c_{12}	$y^{98} + 101y^{97} + \cdots - 326y + 1$
c_6	$(y^{49} - 6y^{48} + \cdots + 25y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.601265+0.799530I$ $a=\ \ 0.371144+0.018717I$ $b=\ \ 0.411619-0.292634I$	$0.89188-2.50997I$	0
$u=-0.601265-0.799530I$ $a=\ \ 0.371144-0.018717I$ $b=\ \ 0.411619+0.292634I$	$0.89188+2.50997I$	0
$u=\ \ 0.742965+0.599497I$ $a=-0.341644-0.232431I$ $b=\ \ 0.575289-0.479550I$	$-1.41187-4.73118I$	0
$u=\ \ 0.742965-0.599497I$ $a=-0.341644+0.232431I$ $b=\ \ 0.575289+0.479550I$	$-1.41187+4.73118I$	0
$u=-0.775758+0.551464I$ $a=\ \ 0.713884+0.158341I$ $b=\ \ 0.345135-0.578530I$	$1.05292-2.70150I$	0
$u=-0.775758-0.551464I$ $a=\ \ 0.713884-0.158341I$ $b=\ \ 0.345135+0.578530I$	$1.05292+2.70150I$	0
$u=-0.913794+0.518684I$ $a=-0.773466-0.493343I$ $b=-0.107817+0.717427I$	$-7.8103-13.8110I$	0
$u=-0.913794-0.518684I$ $a=-0.773466+0.493343I$ $b=-0.107817-0.717427I$	$-7.8103+13.8110I$	0
$u=\ \ 0.838372+0.214613I$ $a=\ \ 1.160930-0.145018I$ $b=\ \ 0.440949+0.575531I$	$-2.76982+1.97446I$	0
$u=\ \ 0.838372-0.214613I$ $a=\ \ 1.160930+0.145018I$ $b=\ \ 0.440949-0.575531I$	$-2.76982-1.97446I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.612109+0.604182I$ $a=-0.362407-1.000320I$ $b=-0.111421+0.461219I$	$-1.41187-4.73118I$	0
$u=-0.612109-0.604182I$ $a=-0.362407+1.000320I$ $b=-0.111421-0.461219I$	$-1.41187+4.73118I$	0
$u=-0.254531+1.112700I$ $a=\ \ 0.877864+0.438971I$ $b=-0.251233+0.146892I$	$-7.07475+2.20435I$	0
$u=-0.254531-1.112700I$ $a=\ \ 0.877864-0.438971I$ $b=-0.251233-0.146892I$	$-7.07475-2.20435I$	0
$u=\ \ 1.049150+0.468661I$ $a=-0.314037+0.177739I$ $b=\ \ 0.224808-0.342256I$	$-6.69520+5.05617I$	0
$u=\ \ 1.049150-0.468661I$ $a=-0.314037-0.177739I$ $b=\ \ 0.224808+0.342256I$	$-6.69520-5.05617I$	0
$u=-0.878034+0.748977I$ $a=-0.428725+0.197953I$ $b=\ \ 0.477283+0.552534I$	$-8.41578+7.83198I$	0
$u=-0.878034-0.748977I$ $a=-0.428725-0.197953I$ $b=\ \ 0.477283-0.552534I$	$-8.41578-7.83198I$	0
$u=\ \ 0.686233+0.942381I$ $a=\ \ 0.000271+0.415794I$ $b=\ \ 0.175155-0.429780I$	$-8.38703+1.13960I$	0
$u=\ \ 0.686233-0.942381I$ $a=\ \ 0.000271-0.415794I$ $b=\ \ 0.175155+0.429780I$	$-8.38703-1.13960I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.766493+0.313170I$ $a=\ \ 1.110710+0.164116I$ $b=-0.500160-0.031141I$	$-7.47312+0.52726I$	0
$u=-0.766493-0.313170I$ $a=\ \ 1.110710-0.164116I$ $b=-0.500160+0.031141I$	$-7.47312-0.52726I$	0
$u=\ \ 0.213501+0.776484I$ $a=-0.843665+0.799992I$ $b=-1.10714+1.71994I$	$-7.12629+5.71564I$	0
$u=\ \ 0.213501-0.776484I$ $a=-0.843665-0.799992I$ $b=-1.10714-1.71994I$	$-7.12629-5.71564I$	0
$u=\ \ 0.601355+1.050520I$ $a=\ \ 0.555692+0.226539I$ $b=-0.022086+0.335554I$	$-5.17927+2.97176I$	0
$u=\ \ 0.601355-1.050520I$ $a=\ \ 0.555692-0.226539I$ $b=-0.022086-0.335554I$	$-5.17927-2.97176I$	0
$u=\ \ 1.000720+0.695820I$ $a=\ \ 0.745496+0.056805I$ $b=\ \ 0.218609+0.616622I$	$-3.76883+3.36908I$	0
$u=\ \ 1.000720-0.695820I$ $a=\ \ 0.745496-0.056805I$ $b=\ \ 0.218609-0.616622I$	$-3.76883-3.36908I$	0
$u=-0.558069+0.522855I$ $a=-0.122912+1.050990I$ $b=-0.403275-0.944836I$	$-8.37472-4.64087I$	0
$u=-0.558069-0.522855I$ $a=-0.122912-1.050990I$ $b=-0.403275+0.944836I$	$-8.37472+4.64087I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.013440 + 1.261000I$ $a = 0.734942 - 0.472678I$ $b = -0.179286 - 0.269085I$	$-1.83648 - 2.54008I$	0
$u = 0.013440 - 1.261000I$ $a = 0.734942 + 0.472678I$ $b = -0.179286 + 0.269085I$	$-1.83648 + 2.54008I$	0
$u = -0.093446 + 1.291680I$ $a = -0.337075 - 0.874524I$ $b = -1.03246 - 1.19486I$	$-3.00552 - 2.00178I$	0
$u = -0.093446 - 1.291680I$ $a = -0.337075 + 0.874524I$ $b = -1.03246 + 1.19486I$	$-3.00552 + 2.00178I$	0
$u = 0.640464 + 0.266462I$ $a = 1.066130 + 0.218861I$ $b = 0.399089 + 0.595313I$	$-3.00552 + 2.00178I$	0
$u = 0.640464 - 0.266462I$ $a = 1.066130 - 0.218861I$ $b = 0.399089 - 0.595313I$	$-3.00552 - 2.00178I$	0
$u = -0.024509 + 1.318700I$ $a = -0.68071 - 1.58708I$ $b = -1.29802 - 2.61295I$	$-2.76982 - 1.97446I$	0
$u = -0.024509 - 1.318700I$ $a = -0.68071 + 1.58708I$ $b = -1.29802 + 2.61295I$	$-2.76982 + 1.97446I$	0
$u = -0.327819 + 0.583087I$ $a = -0.165009 - 0.143366I$ $b = -0.699085 - 1.112450I$	$-1.62426 - 2.89139I$	$-1.83614 + 9.00098I$
$u = -0.327819 - 0.583087I$ $a = -0.165009 + 0.143366I$ $b = -0.699085 + 1.112450I$	$-1.62426 + 2.89139I$	$-1.83614 - 9.00098I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.551909 + 0.314734I$ $a = 0.89110 - 1.25572I$ $b = -0.087561 + 0.634422I$	$-1.62426 + 2.89139I$	$-1.83614 - 9.00098I$
$u = 0.551909 - 0.314734I$ $a = 0.89110 + 1.25572I$ $b = -0.087561 - 0.634422I$	$-1.62426 - 2.89139I$	$-1.83614 + 9.00098I$
$u = -0.609151 + 0.069906I$ $a = 1.100990 + 0.526461I$ $b = 0.499891 - 1.265130I$	$-3.88143 - 5.43641I$	$2.38120 + 7.54528I$
$u = -0.609151 - 0.069906I$ $a = 1.100990 - 0.526461I$ $b = 0.499891 + 1.265130I$	$-3.88143 + 5.43641I$	$2.38120 - 7.54528I$
$u = 0.035210 + 1.406650I$ $a = 0.952310 - 0.095611I$ $b = 2.78836 - 0.18377I$	$-3.76883 + 3.36908I$	0
$u = 0.035210 - 1.406650I$ $a = 0.952310 + 0.095611I$ $b = 2.78836 + 0.18377I$	$-3.76883 - 3.36908I$	0
$u = 0.109284 + 1.405400I$ $a = 0.54725 + 2.33836I$ $b = 0.80233 + 2.90599I$	$-3.88143 + 5.43641I$	0
$u = 0.109284 - 1.405400I$ $a = 0.54725 - 2.33836I$ $b = 0.80233 - 2.90599I$	$-3.88143 - 5.43641I$	0
$u = 0.24099 + 1.39589I$ $a = -0.785127 + 1.132930I$ $b = -0.85392 + 2.05396I$	$-6.98631 + 2.75445I$	0
$u = 0.24099 - 1.39589I$ $a = -0.785127 - 1.132930I$ $b = -0.85392 - 2.05396I$	$-6.98631 - 2.75445I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.21579 + 1.40896I$ $a = -0.23652 + 1.97755I$ $b = 0.11853 + 3.12136I$	$-7.12629 + 5.71564I$	0
$u = 0.21579 - 1.40896I$ $a = -0.23652 - 1.97755I$ $b = 0.11853 - 3.12136I$	$-7.12629 - 5.71564I$	0
$u = -0.05162 + 1.44380I$ $a = -0.46405 + 1.39064I$ $b = -1.01450 + 2.31250I$	$-5.17927 - 2.97176I$	0
$u = -0.05162 - 1.44380I$ $a = -0.46405 - 1.39064I$ $b = -1.01450 - 2.31250I$	$-5.17927 + 2.97176I$	0
$u = 0.01368 + 1.44520I$ $a = -0.90811 + 1.44980I$ $b = -0.49977 + 2.20256I$	$-7.47312 + 0.52726I$	0
$u = 0.01368 - 1.44520I$ $a = -0.90811 - 1.44980I$ $b = -0.49977 - 2.20256I$	$-7.47312 - 0.52726I$	0
$u = 0.00842 + 1.44698I$ $a = 1.00203 - 1.72294I$ $b = 1.09995 - 2.26368I$	$-7.07475 - 2.20435I$	0
$u = 0.00842 - 1.44698I$ $a = 1.00203 + 1.72294I$ $b = 1.09995 + 2.26368I$	$-7.07475 + 2.20435I$	0
$u = -0.11004 + 1.45882I$ $a = 0.686718 + 0.373750I$ $b = 2.28806 + 0.72915I$	$-11.44370 - 8.12756I$	0
$u = -0.11004 - 1.45882I$ $a = 0.686718 - 0.373750I$ $b = 2.28806 - 0.72915I$	$-11.44370 + 8.12756I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.06406 + 1.49140I$ $a = -0.82172 - 1.26604I$ $b = -0.25457 - 1.95023I$	$-13.26630 + 3.54268I$	0
$u = 0.06406 - 1.49140I$ $a = -0.82172 + 1.26604I$ $b = -0.25457 + 1.95023I$	$-13.26630 - 3.54268I$	0
$u = -0.12213 + 1.49628I$ $a = -1.02750 - 1.49115I$ $b = -0.75605 - 2.09017I$	$-8.37472 - 4.64087I$	0
$u = -0.12213 - 1.49628I$ $a = -1.02750 + 1.49115I$ $b = -0.75605 + 2.09017I$	$-8.37472 + 4.64087I$	0
$u = -0.20185 + 1.49925I$ $a = -0.11825 - 1.81705I$ $b = 0.71538 - 2.99125I$	$-14.9424 - 7.4727I$	0
$u = -0.20185 - 1.49925I$ $a = -0.11825 + 1.81705I$ $b = 0.71538 + 2.99125I$	$-14.9424 + 7.4727I$	0
$u = -0.32036 + 1.48082I$ $a = -0.597294 - 0.978220I$ $b = -0.77820 - 2.01419I$	$-13.26630 - 3.54268I$	0
$u = -0.32036 - 1.48082I$ $a = -0.597294 + 0.978220I$ $b = -0.77820 + 2.01419I$	$-13.26630 + 3.54268I$	0
$u = -0.27276 + 1.51130I$ $a = -0.00530 - 1.79034I$ $b = 0.18144 - 2.59266I$	$-5.57317 - 6.53299I$	0
$u = -0.27276 - 1.51130I$ $a = -0.00530 + 1.79034I$ $b = 0.18144 + 2.59266I$	$-5.57317 + 6.53299I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.21558+1.53803I$ $a=-0.18613+1.73024I$ $b=-0.63034+2.83722I$	$-8.41578-7.83198I$	0
$u=-0.21558-1.53803I$ $a=-0.18613-1.73024I$ $b=-0.63034-2.83722I$	$-8.41578+7.83198I$	0
$u=-0.320741+0.310919I$ $a=-3.93867+0.92331I$ $b=-0.666263-0.313444I$	$-5.57317-6.53299I$	$2.95283+12.42721I$
$u=-0.320741-0.310919I$ $a=-3.93867-0.92331I$ $b=-0.666263+0.313444I$	$-5.57317+6.53299I$	$2.95283-12.42721I$
$u=0.27915+1.53150I$ $a=-0.03303-1.78922I$ $b=-0.44692-2.87114I$	$-7.8103+13.8110I$	0
$u=0.27915-1.53150I$ $a=-0.03303+1.78922I$ $b=-0.44692+2.87114I$	$-7.8103-13.8110I$	0
$u=0.25714+1.55253I$ $a=0.502633-0.791123I$ $b=0.331108-1.370570I$	$-8.38703-1.13960I$	0
$u=0.25714-1.55253I$ $a=0.502633+0.791123I$ $b=0.331108+1.370570I$	$-8.38703+1.13960I$	0
$u=0.332458+0.261172I$ $a=1.096740-0.884077I$ $b=-0.701887+0.263772I$	-1.97135	$-3.23135+0.I$
$u=0.332458-0.261172I$ $a=1.096740+0.884077I$ $b=-0.701887-0.263772I$	-1.97135	$-3.23135+0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.13850 + 1.57559I$ $a = -1.16413 + 1.49269I$ $b = -0.85316 + 1.98749I$	$-14.9424 + 7.4727I$	0
$u = \quad 0.13850 - 1.57559I$ $a = -1.16413 - 1.49269I$ $b = -0.85316 - 1.98749I$	$-14.9424 - 7.4727I$	0
$u = \quad 0.14088 + 1.60069I$ $a = -0.23786 - 1.50667I$ $b = -0.71263 - 2.57130I$	$-16.8914 + 3.8329I$	0
$u = \quad 0.14088 - 1.60069I$ $a = -0.23786 + 1.50667I$ $b = -0.71263 + 2.57130I$	$-16.8914 - 3.8329I$	0
$u = -0.30166 + 1.58225I$ $a = \quad 0.109516 + 0.838009I$ $b = -0.23937 + 1.47556I$	$-6.69520 - 5.05617I$	0
$u = -0.30166 - 1.58225I$ $a = \quad 0.109516 - 0.838009I$ $b = -0.23937 - 1.47556I$	$-6.69520 + 5.05617I$	0
$u = \quad 0.106252 + 0.354096I$ $a = -2.48683 + 2.01384I$ $b = -1.371860 - 0.053216I$	$-6.98631 + 2.75445I$	$-5.88485 - 0.42614I$
$u = \quad 0.106252 - 0.354096I$ $a = -2.48683 - 2.01384I$ $b = -1.371860 + 0.053216I$	$-6.98631 - 2.75445I$	$-5.88485 + 0.42614I$
$u = \quad 0.120663 + 0.346842I$ $a = \quad 3.16037 + 0.38450I$ $b = -0.296330 + 0.004024I$	$0.89188 - 2.50997I$	$5.62365 - 9.86280I$
$u = \quad 0.120663 - 0.346842I$ $a = \quad 3.16037 - 0.38450I$ $b = -0.296330 - 0.004024I$	$0.89188 + 2.50997I$	$5.62365 + 9.86280I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.30194 + 1.62391I$ $a = 0.01529 + 1.62187I$ $b = 0.15988 + 2.41535I$	$-11.44370 + 8.12756I$	0
$u = 0.30194 - 1.62391I$ $a = 0.01529 - 1.62187I$ $b = 0.15988 - 2.41535I$	$-11.44370 - 8.12756I$	0
$u = -0.17275 + 1.67346I$ $a = 0.406277 + 1.126200I$ $b = 0.31705 + 1.83585I$	$-16.8914 + 3.8329I$	0
$u = -0.17275 - 1.67346I$ $a = 0.406277 - 1.126200I$ $b = 0.31705 - 1.83585I$	$-16.8914 - 3.8329I$	0
$u = 0.224421 + 0.014031I$ $a = -2.33880 - 6.47809I$ $b = -0.448282 + 0.138536I$	$1.05292 + 2.70150I$	$19.0928 - 8.4683I$
$u = 0.224421 - 0.014031I$ $a = -2.33880 + 6.47809I$ $b = -0.448282 - 0.138536I$	$1.05292 - 2.70150I$	$19.0928 + 8.4683I$
$u = 0.0775099 + 0.0095965I$ $a = -3.08930 - 8.74170I$ $b = 1.25369 - 0.67794I$	$-1.83648 - 2.54008I$	$7.90046 + 0.06865I$
$u = 0.0775099 - 0.0095965I$ $a = -3.08930 + 8.74170I$ $b = 1.25369 + 0.67794I$	$-1.83648 + 2.54008I$	$7.90046 - 0.06865I$

III. $I_3^u = \langle u^4+u^3+2u^2+b+2u,\ -u^6-2u^4-u^3+u^2+a-u+1,\ u^7+u^6+4u^5+5u^4+5u^3+6u^2+2u+1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}u^6+2u^4+u^3-u^2+u-1\\-u^4-u^3-2u^2-2u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}0\\-u^6-2u^4-u^3+u^2-u+1\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-1\\u^3+u^2+2u+1\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u^3-2u\\u^6+u^5+4u^4+4u^3+4u^2+4u+1\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-1\\-u^5-2u^4-2u^3-4u^2-2u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}u^2+1\\u^2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^2-1\\-u^6+u^5-u^4+u^3+3u^2+1\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-u\\-u^6-2u^5-2u^4-4u^3-2u^2+u\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^6+u^5-7u^4+8u^3-4u^2+12u+6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^7 - 5u^5 + u^4 + 14u^3 - 9u^2 + 2u - 5$
c_2, c_{11}	$u^7 - u^6 - 2u^4 + 2u^3 + 4u^2 + 5u - 1$
c_3, c_{10}	$u^7 + u^6 + 2u^5 + 2u^3 - u^2 + u - 1$
c_4, c_5, c_7 c_8	$u^7 + u^6 + 4u^5 + 5u^4 + 5u^3 + 6u^2 + 2u + 1$
c_6	$u^7 - u^6 - 3u^5 + 10u^4 - 12u^3 + 8u^2 - 3u + 1$
c_9, c_{12}	$u^7 - u^6 + 4u^5 - 5u^4 + 5u^3 - 6u^2 + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^7 - 10y^6 + 53y^5 - 137y^4 + 194y^3 - 15y^2 - 86y - 25$
c_2, c_{11}	$y^7 - y^6 + 14y^4 + 18y^3 + 33y - 1$
c_3, c_{10}	$y^7 + 3y^6 + 8y^5 + 12y^4 + 10y^3 + 3y^2 - y - 1$
c_4, c_5, c_7 c_8, c_9, c_{12}	$y^7 + 7y^6 + 16y^5 + 7y^4 - 21y^3 - 26y^2 - 8y - 1$
c_6	$y^7 - 7y^6 + 5y^5 - 18y^4 + 4y^3 - 12y^2 - 7y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.10838$ $a=\ \ 0.174033$ $b=-0.387834$	-0.187807	-39.0540
$u=\ \ 0.030175+1.243640I$ $a=\ \ 1.53616-0.67798I$ $b=\ \ 0.787443-0.485292I$	$-4.85229-2.21700I$	$2.43422+2.76940I$
$u=\ \ 0.030175-1.243640I$ $a=\ \ 1.53616+0.67798I$ $b=\ \ 0.787443+0.485292I$	$-4.85229+2.21700I$	$2.43422-2.76940I$
$u=-0.153212+0.464251I$ $a=-0.827817+0.635564I$ $b=\ \ 0.578417-0.631263I$	$0.66234-3.24612I$	$5.53982+5.24369I$
$u=-0.153212-0.464251I$ $a=-0.827817-0.635564I$ $b=\ \ 0.578417+0.631263I$	$0.66234+3.24612I$	$5.53982-5.24369I$
$u=\ \ 0.17723+1.55173I$ $a=-0.295356+1.335600I$ $b=\ \ 0.32806+2.00086I$	$-13.8104+7.2331I$	$-2.44727-4.47528I$
$u=\ \ 0.17723-1.55173I$ $a=-0.295356-1.335600I$ $b=\ \ 0.32806-2.00086I$	$-13.8104-7.2331I$	$-2.44727+4.47528I$

IV.

$\boldsymbol{I_4^u = \langle 4u^{25}-11u^{24}+\cdots+b-3,\ 5u^{25}-13u^{24}+\cdots+a+4,\ u^{26}-2u^{25}+\cdots-2u+1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}-5u^{25}+13u^{24}+\cdots-10u-4\\-4u^{25}+11u^{24}+\cdots-10u+3\end{pmatrix}$$

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

$$a_3 = \begin{pmatrix}-3u^{25}+6u^{24}+\cdots-9u-4\\-u^{25}-9u^{23}+\cdots-8u^2-2u\end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix}-5u^{25}+7u^{24}+\cdots-42u+5\\u^{25}-6u^{24}+\cdots+10u-2\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-3u^{25}+7u^{24}+\cdots-22u+15\\-7u^{25}+7u^{24}+\cdots+12u-7\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}-2u^{25}+4u^{24}+\cdots-29u+1\\9u^{25}-18u^{24}+\cdots+3u+2\end{pmatrix}$$

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

$$a_1 = \begin{pmatrix}-3u^{25}+6u^{24}+\cdots-9u-5\\2u^{25}-8u^{24}+\cdots+2u-1\end{pmatrix}$$

$$a_8 = \begin{pmatrix}4u^{25}-8u^{24}+\cdots+25u-1\\-u^{25}+u^{24}+\cdots+11u-4\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= 16u^{25}-52u^{24}+260u^{23}-670u^{22}+1842u^{21}-3831u^{20}+7521u^{19}-12817u^{18}+19810u^{17}-28104u^{16}+36014u^{15}-43461u^{14}+47847u^{13}-50479u^{12}+48836u^{11}-45762u^{10}+38742u^9-31570u^8+22476u^7-15159u^6+8472u^5-4567u^4+1807u^3-763u^2+156u-57$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^{13}-6u^{12}+\cdots+5u-1)^2$
c_2, c_{11}	$u^{26}-4u^{25}+\cdots-u+1$
c_3, c_{10}	$u^{26}-u^{25}+\cdots+4u+1$
c_4, c_5, c_7 c_8	$u^{26}-2u^{25}+\cdots-2u+1$
c_6	$(u^{13}+2u^{12}+\cdots+u+1)^2$
c_9, c_{12}	$u^{26}+2u^{25}+\cdots+2u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^{13}+4y^{11}+\cdots-3y-1)^2$
c_2, c_{11}	$y^{26}+4y^{25}+\cdots+5y+1$
c_3, c_{10}	$y^{26}+9y^{25}+\cdots-6y+1$
c_4, c_5, c_7 c_8, c_9, c_{12}	$y^{26}+26y^{25}+\cdots+34y+1$
c_6	$(y^{13}-7y^{10}+\cdots-y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.730172+0.693234I$ $a=\ \ 0.457696+0.118570I$ $b=\ \ 0.236181-0.470634I$	$0.74327-2.76180I$	$-9.3941+14.0297I$
$u=-0.730172-0.693234I$ $a=\ \ 0.457696-0.118570I$ $b=\ \ 0.236181+0.470634I$	$0.74327+2.76180I$	$-9.3941-14.0297I$
$u=\ \ 0.773462+0.552068I$ $a=\ \ 1.026150+0.066541I$ $b=\ \ 0.654746+0.661477I$	$-2.74327+2.81882I$	$5.01074-8.12348I$
$u=\ \ 0.773462-0.552068I$ $a=\ \ 1.026150-0.066541I$ $b=\ \ 0.654746-0.661477I$	$-2.74327-2.81882I$	$5.01074+8.12348I$
$u=\ \ 0.720017+0.607404I$ $a=-0.275549-0.019132I$ $b=-0.570038+0.617491I$	$-6.28182+4.31867I$	$-0.75118-2.96077I$
$u=\ \ 0.720017-0.607404I$ $a=-0.275549+0.019132I$ $b=-0.570038-0.617491I$	$-6.28182-4.31867I$	$-0.75118+2.96077I$
$u=-0.080666+1.268250I$ $a=-1.08174-2.09802I$ $b=-1.76821-2.64796I$	$-8.68134-6.43987I$	$-6.48218+7.11485I$
$u=-0.080666-1.268250I$ $a=-1.08174+2.09802I$ $b=-1.76821+2.64796I$	$-8.68134+6.43987I$	$-6.48218-7.11485I$
$u=-0.017263+1.283860I$ $a=\ \ 0.198829+0.356895I$ $b=-0.896234+0.172667I$	$-2.39119+2.86259I$	$-3.54485-5.28321I$
$u=-0.017263-1.283860I$ $a=\ \ 0.198829-0.356895I$ $b=-0.896234-0.172667I$	$-2.39119-2.86259I$	$-3.54485+5.28321I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.015284 + 1.311700I$ $a = -1.004590 + 0.763267I$ $b = -2.46587 + 1.02119I$	$-2.74327 + 2.81882I$	$5.01074 - 8.12348I$
$u = 0.015284 - 1.311700I$ $a = -1.004590 - 0.763267I$ $b = -2.46587 - 1.02119I$	$-2.74327 - 2.81882I$	$5.01074 + 8.12348I$
$u = 0.210688 + 0.636307I$ $a = 0.710237 - 0.090783I$ $b = 1.30620 + 0.62197I$	$-2.39119 + 2.86259I$	$-3.54485 - 5.28321I$
$u = 0.210688 - 0.636307I$ $a = 0.710237 + 0.090783I$ $b = 1.30620 - 0.62197I$	$-2.39119 - 2.86259I$	$-3.54485 + 5.28321I$
$u = 0.370652 + 1.317530I$ $a = -0.886501 + 0.298765I$ $b = -0.838761 + 0.875858I$	-8.67622	$-8.33663 + 0.I$
$u = 0.370652 - 1.317530I$ $a = -0.886501 - 0.298765I$ $b = -0.838761 - 0.875858I$	-8.67622	$-8.33663 + 0.I$
$u = 0.26231 + 1.41381I$ $a = -0.06979 + 2.20797I$ $b = 0.09292 + 2.96289I$	$-8.68134 + 6.43987I$	$-6.48218 - 7.11485I$
$u = 0.26231 - 1.41381I$ $a = -0.06979 - 2.20797I$ $b = 0.09292 - 2.96289I$	$-8.68134 - 6.43987I$	$-6.48218 + 7.11485I$
$u = -0.080835 + 0.523611I$ $a = -1.86091 + 1.66996I$ $b = -0.450527 + 1.118720I$	$-5.91635 + 5.69889I$	$-0.17009 - 4.31980I$
$u = -0.080835 - 0.523611I$ $a = -1.86091 - 1.66996I$ $b = -0.450527 - 1.118720I$	$-5.91635 - 5.69889I$	$-0.17009 + 4.31980I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.21536+1.46358I$ $a=\ \ 0.02422-1.85633I$ $b=\ \ 0.36067-2.69743I$	$-5.91635-5.69889I$	$0.+4.31980I$
$u=-0.21536-1.46358I$ $a=\ \ 0.02422+1.85633I$ $b=\ \ 0.36067+2.69743I$	$-5.91635+5.69889I$	$0.-4.31980I$
$u=-0.20434+1.48454I$ $a=-0.179745-1.164140I$ $b=\ \ 0.24017-1.99352I$	$-6.28182-4.31867I$	$0.+2.96077I$
$u=-0.20434-1.48454I$ $a=-0.179745+1.164140I$ $b=\ \ 0.24017+1.99352I$	$-6.28182+4.31867I$	$0.-2.96077I$
$u=-0.023777+0.333723I$ $a=-4.05830+0.35369I$ $b=\ \ 0.098759-0.281806I$	$0.74327-2.76180I$	$-9.3941+14.0297I$
$u=-0.023777-0.333723I$ $a=-4.05830-0.35369I$ $b=\ \ 0.098759+0.281806I$	$0.74327+2.76180I$	$-9.3941-14.0297I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^7-5u^5+\cdots+2u-5)(u^{13}-6u^{12}+\cdots+5u-1)^2$ $\cdot(u^{27}-7u^{26}+\cdots+176u-16)(u^{49}+8u^{48}+\cdots-u+139)^2$
c_2, c_{11}	$(u^7-u^6-2u^4+2u^3+4u^2+5u-1)(u^{26}-4u^{25}+\cdots-u+1)$ $\cdot(u^{27}+u^{26}+\cdots-3u+1)(u^{98}-u^{97}+\cdots+78991u+5641)$
c_3, c_{10}	$(u^7+u^6+2u^5+2u^3-u^2+u-1)(u^{26}-u^{25}+\cdots+4u+1)$ $\cdot(u^{27}+u^{26}+\cdots+3u+1)(u^{98}-12u^{96}+\cdots-2731098u+1190927)$
c_4, c_5, c_7 c_8	$(u^7+u^6+\cdots+2u+1)(u^{26}-2u^{25}+\cdots-2u+1)$ $\cdot(u^{27}-u^{26}+\cdots+2u+1)(u^{98}+u^{97}+\cdots+36u+1)$
c_6	$(u^7-u^6-3u^5+10u^4-12u^3+8u^2-3u+1)$ $\cdot((u^{13}+2u^{12}+\cdots+u+1)^2)(u^{27}-16u^{26}+\cdots+22u-4)$ $\cdot(u^{49}+6u^{48}+\cdots+7u+1)^2$
c_9, c_{12}	$(u^7-u^6+\cdots+2u-1)(u^{26}+2u^{25}+\cdots+2u+1)$ $\cdot(u^{27}-u^{26}+\cdots+2u+1)(u^{98}+u^{97}+\cdots+36u+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^7-10y^6+53y^5-137y^4+194y^3-15y^2-86y-25)$ $\cdot((y^{13}+4y^{11}+\cdots-3y-1)^2)(y^{27}-5y^{26}+\cdots+5280y-256)$ $\cdot(y^{49}-30y^{48}+\cdots-378913y-19321)^2$
c_2, c_{11}	$(y^7-y^6+14y^4+18y^3+33y-1)(y^{26}+4y^{25}+\cdots+5y+1)$ $\cdot(y^{27}-7y^{26}+\cdots+27y-1)$ $\cdot(y^{98}+23y^{97}+\cdots+672079733y+31820881)$
c_3, c_{10}	$(y^7+3y^6+\cdots-y-1)(y^{26}+9y^{25}+\cdots-6y+1)$ $\cdot(y^{27}-7y^{26}+\cdots+17y-1)$ $\cdot(y^{98}-24y^{97}+\cdots-54241979206882y+1418307119329)$
c_4, c_5, c_7 c_8, c_9, c_{12}	$(y^7+7y^6+16y^5+7y^4-21y^3-26y^2-8y-1)$ $\cdot(y^{26}+26y^{25}+\cdots+34y+1)(y^{27}+25y^{26}+\cdots+18y-1)$ $\cdot(y^{98}+101y^{97}+\cdots-326y+1)$
c_6	$(y^7-7y^6+5y^5-18y^4+4y^3-12y^2-7y-1)$ $\cdot((y^{13}-7y^{10}+\cdots-y-1)^2)(y^{27}-10y^{26}+\cdots+492y-16)$ $\cdot(y^{49}-6y^{48}+\cdots+25y-1)^2$