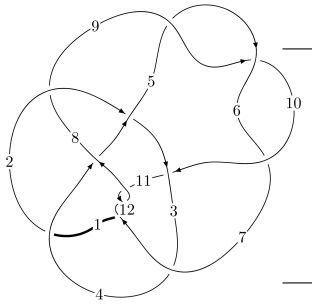
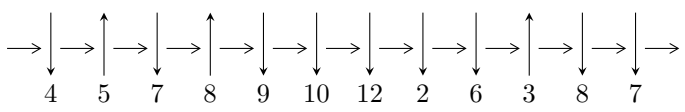
$12n_{0686}$ $(K12n_{0686})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.69505 \times 10^{130} u^{65} + 2.15148 \times 10^{129} u^{64} + \cdots + 2.43963 \times 10^{130} b - 1.45063 \times 10^{131},$$
$$-8.57548 \times 10^{130} u^{65} + 3.16614 \times 10^{129} u^{64} + \cdots + 2.43963 \times 10^{130} a - 6.80613 \times 10^{131},$$
$$u^{66} + 8u^{64} + \cdots + 14u + 1 \rangle$$
$$I_2^u = \langle -u^{17} - u^{16} + \cdots + b - 7u,\ 244u^{17} + 447u^{16} + \cdots + 19a + 657,\ u^{18} + u^{17} + \cdots + 8u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 84 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. $\boldsymbol{I_1^u = \langle -2.70 \times 10^{130} u^{65} + 2.15 \times 10^{129} u^{64} + \cdots + 2.44 \times 10^{130} b - 1.45 \times 10^{131},\ -8.58 \times 10^{130} u^{65} + 3.17 \times 10^{129} u^{64} + \cdots + 2.44 \times 10^{130} a - 6.81 \times 10^{131},\ u^{66} + 8u^{64} + \cdots + 14u + 1 \rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3.51508u^{65} - 0.129779u^{64} + \cdots + 210.106u + 27.8982 \\ 1.10470u^{65} - 0.0881890u^{64} + \cdots + 55.7119u + 5.94611 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 4.56038u^{65} - 0.0374882u^{64} + \cdots + 267.516u + 33.7146 \\ 1.04992u^{65} - 0.150384u^{64} + \cdots + 53.3745u + 5.85382 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 7.93049u^{65} - 1.14259u^{64} + \cdots + 401.649u + 50.8636 \\ 1.21958u^{65} - 0.156828u^{64} + \cdots + 62.7169u + 7.17179 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 11.2952u^{65} - 2.21571u^{64} + \cdots + 527.820u + 67.7880 \\ 0.727751u^{65} - 0.0696228u^{64} + \cdots + 51.3476u + 6.91232 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 4.61977u^{65} - 0.217968u^{64} + \cdots + 265.817u + 33.8443 \\ 1.10470u^{65} - 0.0881890u^{64} + \cdots + 55.7119u + 5.94611 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 8.15717u^{65} - 1.17920u^{64} + \cdots + 412.691u + 52.1630 \\ 1.24237u^{65} - 0.0782801u^{64} + \cdots + 63.4671u + 7.14796 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -13.9731u^{65} + 2.50512u^{64} + \cdots - 652.317u - 80.5461 \\ -1.33472u^{65} + 0.329465u^{64} + \cdots - 50.4358u - 6.86127 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.613469u^{65} + 0.240964u^{64} + \cdots + 17.8117u - 7.54006$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{66}+6u^{65}+\cdots+5840u+651$
c_2	$u^{66}+8u^{65}+\cdots+244u-37$
c_3	$u^{66}-34u^{64}+\cdots-1660u-803$
c_4	$u^{66}+8u^{64}+\cdots+2550u-731$
c_5, c_6, c_9	$u^{66}+u^{65}+\cdots+14u-3$
c_7, c_{11}, c_{12}	$u^{66}+8u^{64}+\cdots+14u+1$
c_8	$u^{66}+u^{65}+\cdots-979u-167$
c_{10}	$u^{66}+27u^{64}+\cdots-2100877u+215861$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{66} - 70y^{65} + \cdots - 19635172y + 423801$
c_2	$y^{66} + 18y^{65} + \cdots - 28826y + 1369$
c_3	$y^{66} - 68y^{65} + \cdots + 49426552y + 644809$
c_4	$y^{66} + 16y^{65} + \cdots + 19981630y + 534361$
c_5, c_6, c_9	$y^{66} - 71y^{65} + \cdots - 304y + 9$
c_7, c_{11}, c_{12}	$y^{66} + 16y^{65} + \cdots - 28y + 1$
c_8	$y^{66} - 17y^{65} + \cdots - 794781y + 27889$
c_{10}	$y^{66} + 54y^{65} + \cdots - 373655164727y + 46595971321$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.381480 + 0.902641I$ $a = -0.495217 - 0.818731I$ $b = 0.252778 + 0.945202I$	$-4.89349 - 2.13130I$	$-7.50430 + 3.71654I$
$u = 0.381480 - 0.902641I$ $a = -0.495217 + 0.818731I$ $b = 0.252778 - 0.945202I$	$-4.89349 + 2.13130I$	$-7.50430 - 3.71654I$
$u = -0.038908 + 0.939745I$ $a = -0.275001 - 0.321868I$ $b = -0.871697 + 0.971052I$	$-3.77402 - 3.72825I$	$-5.26113 + 2.10644I$
$u = -0.038908 - 0.939745I$ $a = -0.275001 + 0.321868I$ $b = -0.871697 - 0.971052I$	$-3.77402 + 3.72825I$	$-5.26113 - 2.10644I$
$u = 0.905831 + 0.018069I$ $a = -0.533383 + 0.894315I$ $b = 0.0381606 - 0.1308590I$	$-7.85798 + 1.54242I$	$-13.03025 - 0.57872I$
$u = 0.905831 - 0.018069I$ $a = -0.533383 - 0.894315I$ $b = 0.0381606 + 0.1308590I$	$-7.85798 - 1.54242I$	$-13.03025 + 0.57872I$
$u = -0.265939 + 0.798350I$ $a = 0.838512 - 0.776076I$ $b = 0.057693 + 0.475963I$	$1.00311 + 2.04923I$	$-3.92564 - 3.61296I$
$u = -0.265939 - 0.798350I$ $a = 0.838512 + 0.776076I$ $b = 0.057693 - 0.475963I$	$1.00311 - 2.04923I$	$-3.92564 + 3.61296I$
$u = -0.755298 + 0.895200I$ $a = -1.00097 + 1.25369I$ $b = 1.87437 + 0.23139I$	$-11.19350 + 0.70321I$	0
$u = -0.755298 - 0.895200I$ $a = -1.00097 - 1.25369I$ $b = 1.87437 - 0.23139I$	$-11.19350 - 0.70321I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.496215+0.652094I$ $a=\ 0.27441+1.70971I$ $b=\ 0.62615-1.80443I$	$-5.71011+7.01316I$	$-9.56711-9.06601I$
$u=-0.496215-0.652094I$ $a=\ 0.27441-1.70971I$ $b=\ 0.62615+1.80443I$	$-5.71011-7.01316I$	$-9.56711+9.06601I$
$u=\ 0.830499+0.849156I$ $a=\ 0.256829+1.321510I$ $b=-1.65652-0.66579I$	$-4.73481-4.19817I$	0
$u=\ 0.830499-0.849156I$ $a=\ 0.256829-1.321510I$ $b=-1.65652+0.66579I$	$-4.73481+4.19817I$	0
$u=-0.792820+0.887815I$ $a=-0.33108+1.50593I$ $b=\ 2.02793-0.81025I$	$-11.23670+5.15790I$	0
$u=-0.792820-0.887815I$ $a=-0.33108-1.50593I$ $b=\ 2.02793+0.81025I$	$-11.23670-5.15790I$	0
$u=-0.185557+1.202860I$ $a=\ 0.628073-1.140700I$ $b=-0.424674+0.578911I$	$2.05717+2.26630I$	0
$u=-0.185557-1.202860I$ $a=\ 0.628073+1.140700I$ $b=-0.424674-0.578911I$	$2.05717-2.26630I$	0
$u=-0.166375+0.760046I$ $a=-2.11546-1.78936I$ $b=\ 0.611150+1.095880I$	$-5.12370-4.24500I$	$-6.05961-1.11595I$
$u=-0.166375-0.760046I$ $a=-2.11546+1.78936I$ $b=\ 0.611150-1.095880I$	$-5.12370+4.24500I$	$-6.05961+1.11595I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.017260 + 0.775267I$ $a = 0.72199 - 1.86824I$ $b = -0.239640 + 0.901747I$	$1.81981 + 1.76274I$	$-0.73012 - 3.27359I$
$u = 0.017260 - 0.775267I$ $a = 0.72199 + 1.86824I$ $b = -0.239640 - 0.901747I$	$1.81981 - 1.76274I$	$-0.73012 + 3.27359I$
$u = 0.779311 + 0.979842I$ $a = 0.771946 + 0.959390I$ $b = -1.60829 + 0.02335I$	$-4.32456 - 1.86631I$	0
$u = 0.779311 - 0.979842I$ $a = 0.771946 - 0.959390I$ $b = -1.60829 - 0.02335I$	$-4.32456 + 1.86631I$	0
$u = -1.020010 + 0.782197I$ $a = -0.059578 + 1.004880I$ $b = 1.247920 - 0.361242I$	$-4.77746 + 2.77204I$	0
$u = -1.020010 - 0.782197I$ $a = -0.059578 - 1.004880I$ $b = 1.247920 + 0.361242I$	$-4.77746 - 2.77204I$	0
$u = 1.005160 + 0.805635I$ $a = -0.761996 - 0.469288I$ $b = 1.85270 + 0.11551I$	$-12.76450 - 5.71162I$	0
$u = 1.005160 - 0.805635I$ $a = -0.761996 + 0.469288I$ $b = 1.85270 - 0.11551I$	$-12.76450 + 5.71162I$	0
$u = 0.021107 + 0.705377I$ $a = 0.578182 + 0.067715I$ $b = 0.834319 + 0.472388I$	$1.57907 + 2.38485I$	$-0.324197 - 0.690209I$
$u = 0.021107 - 0.705377I$ $a = 0.578182 - 0.067715I$ $b = 0.834319 - 0.472388I$	$1.57907 - 2.38485I$	$-0.324197 + 0.690209I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.490966 + 0.475053I$ $a = -0.55254 + 1.62553I$ $b = -0.09615 - 1.50670I$	$0.16917 - 3.95160I$	$-7.93720 + 9.53197I$
$u = 0.490966 - 0.475053I$ $a = -0.55254 - 1.62553I$ $b = -0.09615 + 1.50670I$	$0.16917 + 3.95160I$	$-7.93720 - 9.53197I$
$u = 0.379973 + 0.551049I$ $a = -1.78771 - 0.92141I$ $b = -0.300972 - 0.209570I$	$0.75753 - 4.12116I$	$-7.35035 + 12.02767I$
$u = 0.379973 - 0.551049I$ $a = -1.78771 + 0.92141I$ $b = -0.300972 + 0.209570I$	$0.75753 + 4.12116I$	$-7.35035 - 12.02767I$
$u = -1.064810 + 0.801331I$ $a = 0.792009 - 0.579040I$ $b = -1.72587 + 0.09376I$	$-5.93827 + 1.09172I$	0
$u = -1.064810 - 0.801331I$ $a = 0.792009 + 0.579040I$ $b = -1.72587 - 0.09376I$	$-5.93827 - 1.09172I$	0
$u = -0.143019 + 1.344970I$ $a = -0.473522 - 0.509487I$ $b = 0.417362 + 0.247824I$	$3.24630 + 2.81207I$	0
$u = -0.143019 - 1.344970I$ $a = -0.473522 + 0.509487I$ $b = 0.417362 - 0.247824I$	$3.24630 - 2.81207I$	0
$u = 1.089300 + 0.810624I$ $a = -0.721178 - 0.626134I$ $b = 1.64027 - 0.04042I$	$-6.51348 + 4.48861I$	0
$u = 1.089300 - 0.810624I$ $a = -0.721178 + 0.626134I$ $b = 1.64027 + 0.04042I$	$-6.51348 - 4.48861I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.474413+0.430132I$ $a=\ \ 2.22892-1.47522I$ $b=\ \ 0.398954-0.549454I$	$-5.98479+5.90839I$	$-10.77299-9.08116I$
$u=-0.474413-0.430132I$ $a=\ \ 2.22892+1.47522I$ $b=\ \ 0.398954+0.549454I$	$-5.98479-5.90839I$	$-10.77299+9.08116I$
$u=-1.117140+0.824420I$ $a=\ \ 0.676641-0.619494I$ $b=-1.66630-0.17442I$	$-13.8794-8.3029I$	0
$u=-1.117140-0.824420I$ $a=\ \ 0.676641+0.619494I$ $b=-1.66630+0.17442I$	$-13.8794+8.3029I$	0
$u=\ \ 0.868320+1.114680I$ $a=-0.75239-1.40142I$ $b=\ \ 1.42271+0.41666I$	$-11.78330-1.19681I$	0
$u=\ \ 0.868320-1.114680I$ $a=-0.75239+1.40142I$ $b=\ \ 1.42271-0.41666I$	$-11.78330+1.19681I$	0
$u=\ \ 1.20197+0.75106I$ $a=-0.035347+0.853586I$ $b=-1.196160-0.140651I$	$-11.31340-2.25996I$	0
$u=\ \ 1.20197-0.75106I$ $a=-0.035347-0.853586I$ $b=-1.196160+0.140651I$	$-11.31340+2.25996I$	0
$u=-0.91284+1.08691I$ $a=-0.446199+0.740868I$ $b=\ \ 1.41565-0.16249I$	$-3.84346+4.28579I$	0
$u=-0.91284-1.08691I$ $a=-0.446199-0.740868I$ $b=\ \ 1.41565+0.16249I$	$-3.84346-4.28579I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.91205 + 1.11570I$ $a = -0.63727 - 1.31272I$ $b = 1.67828 + 0.62567I$	$-5.52111 - 11.73990I$	0
$u = 0.91205 - 1.11570I$ $a = -0.63727 + 1.31272I$ $b = 1.67828 - 0.62567I$	$-5.52111 + 11.73990I$	0
$u = -0.91053 + 1.11720I$ $a = 0.70943 - 1.31981I$ $b = -1.55420 + 0.57473I$	$-4.93579 + 6.09434I$	0
$u = -0.91053 - 1.11720I$ $a = 0.70943 + 1.31981I$ $b = -1.55420 - 0.57473I$	$-4.93579 - 6.09434I$	0
$u = -0.91964 + 1.12282I$ $a = 0.59423 - 1.33466I$ $b = -1.79214 + 0.62953I$	$-12.8813 + 15.6604I$	0
$u = -0.91964 - 1.12282I$ $a = 0.59423 + 1.33466I$ $b = -1.79214 - 0.62953I$	$-12.8813 - 15.6604I$	0
$u = -0.514106 + 0.183956I$ $a = 0.91070 + 1.13917I$ $b = -0.429112 - 0.679047I$	$-0.992824 + 0.084224I$	$-11.71855 + 1.75099I$
$u = -0.514106 - 0.183956I$ $a = 0.91070 - 1.13917I$ $b = -0.429112 + 0.679047I$	$-0.992824 - 0.084224I$	$-11.71855 - 1.75099I$
$u = 0.32591 + 1.42708I$ $a = 0.480076 - 0.162455I$ $b = -0.612916 - 0.001301I$	$-2.95398 - 6.38488I$	0
$u = 0.32591 - 1.42708I$ $a = 0.480076 + 0.162455I$ $b = -0.612916 + 0.001301I$	$-2.95398 + 6.38488I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.04603 + 1.17919I$ $a = 0.290516 + 0.627195I$ $b = -1.387930 - 0.223326I$	$-10.02500 - 5.74966I$	0
$u = 1.04603 - 1.17919I$ $a = 0.290516 - 0.627195I$ $b = -1.387930 + 0.223326I$	$-10.02500 + 5.74966I$	0
$u = -0.228442 + 0.312802I$ $a = 0.53438 + 1.55461I$ $b = -1.109960 - 0.068072I$	$-0.710026 + 0.001156I$	$-6.94437 - 0.21585I$
$u = -0.228442 - 0.312802I$ $a = 0.53438 - 1.55461I$ $b = -1.109960 + 0.068072I$	$-0.710026 - 0.001156I$	$-6.94437 + 0.21585I$
$u = -0.332795$ $a = 1.34321$ $b = -0.576763$	-0.861436	-11.4550
$u = -0.165446$ $a = 9.04077$ $b = 1.12903$	-8.63556	-9.01670

II. $I_2^u = \langle -u^{17} - u^{16} + \cdots + b - 7u,\ 244u^{17} + 447u^{16} + \cdots + 19a + 657,\ u^{18} + u^{17} + \cdots + 8u^2 + 1 \rangle$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -12.8421u^{17} - 23.5263u^{16} + \cdots - 27.7895u - 34.5789 \\ u^{17} + u^{16} + \cdots + 27u^3 + 7u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -17.4737u^{17} - 31.4211u^{16} + \cdots - 33.6316u - 45.2632 \\ 3.47368u^{17} + 4.42105u^{16} + \cdots + 11.6316u + 3.26316 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -4.89474u^{17} + 8.31579u^{16} + \cdots - 35.5263u + 38.9474 \\ -6.21053u^{17} - 13.6316u^{16} + \cdots - 7.94737u - 23.8947 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 4.68421u^{17} - 11.9474u^{16} + \cdots + 27.5789u - 48.8421 \\ 8.10526u^{17} + 9.31579u^{16} + \cdots + 22.4737u + 7.94737 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -11.8421u^{17} - 22.5263u^{16} + \cdots - 20.7895u - 34.5789 \\ u^{17} + u^{16} + \cdots + 27u^3 + 7u \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -2.31579u^{17} + 9.05263u^{16} + \cdots - 22.4211u + 33.1579 \\ -4.05263u^{17} - 9.15789u^{16} + \cdots - 7.73684u - 16.4737 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -8.36842u^{17} + 3.89474u^{16} + \cdots - 37.1579u + 36.6842 \\ -9.52632u^{17} - 13.5789u^{16} + \cdots - 21.3684u - 15.7368 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= 49u^{17} + 9u^{16} + 240u^{15} + 9u^{14} + 621u^{13} - 98u^{12} + 1237u^{11} - 361u^{10} + 1867u^9 - 760u^8 + 1897u^7 - 1242u^6 + 1412u^5 - 1233u^4 + 809u^3 - 508u^2 + 170u - 89$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} - 13u^{17} + \cdots - 88u + 11$
c_2	$u^{18} + 5u^{17} + \cdots + 2u + 1$
c_3	$u^{18} + u^{17} + \cdots + 6u^2 + 1$
c_4	$u^{18} - u^{17} + \cdots + u^2 + 1$
c_5, c_6	$u^{18} - 10u^{16} + \cdots - 2u + 1$
c_7	$u^{18} + u^{17} + \cdots + 8u^2 + 1$
c_8	$u^{18} + u^{16} + \cdots + u + 1$
c_9	$u^{18} - 10u^{16} + \cdots + 2u + 1$
c_{10}	$u^{18} + 3u^{17} + \cdots - 3u + 1$
c_{11}, c_{12}	$u^{18} - u^{17} + \cdots + 8u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} - 7y^{17} + \cdots + 968y + 121$
c_2	$y^{18} + y^{17} + \cdots + 2y + 1$
c_3	$y^{18} - 9y^{17} + \cdots + 12y + 1$
c_4	$y^{18} - 5y^{17} + \cdots + 2y + 1$
c_5, c_6, c_9	$y^{18} - 20y^{17} + \cdots + 16y + 1$
c_7, c_{11}, c_{12}	$y^{18} + 11y^{17} + \cdots + 16y + 1$
c_8	$y^{18} + 2y^{17} + \cdots - 5y + 1$
c_{10}	$y^{18} + 13y^{17} + \cdots - 7y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.804642+0.868057I$ $a=-0.36882+1.48135I$ $b=\ \ 1.378990-0.248447I$	$-9.83536+1.64758I$	$-9.43619-2.86445I$
$u=-0.804642-0.868057I$ $a=-0.36882-1.48135I$ $b=\ \ 1.378990+0.248447I$	$-9.83536-1.64758I$	$-9.43619+2.86445I$
$u=\ \ 0.044577+1.238730I$ $a=-0.408391+0.683987I$ $b=-0.073590-0.432493I$	$3.80104-3.17945I$	$1.80104+7.13521I$
$u=\ \ 0.044577-1.238730I$ $a=-0.408391-0.683987I$ $b=-0.073590+0.432493I$	$3.80104+3.17945I$	$1.80104-7.13521I$
$u=\ \ 0.264515+1.248310I$ $a=\ \ 0.649266+1.187430I$ $b=-0.426970-0.481643I$	$1.90679-1.92588I$	$-11.44215-7.89971I$
$u=\ \ 0.264515-1.248310I$ $a=\ \ 0.649266-1.187430I$ $b=-0.426970+0.481643I$	$1.90679+1.92588I$	$-11.44215+7.89971I$
$u=\ \ 0.925026+0.906908I$ $a=\ \ 0.360696+1.026960I$ $b=-1.47624-0.36649I$	$-4.24577-3.38226I$	$-8.45773+3.28670I$
$u=\ \ 0.925026-0.906908I$ $a=\ \ 0.360696-1.026960I$ $b=-1.47624+0.36649I$	$-4.24577+3.38226I$	$-8.45773-3.28670I$
$u=-0.238208+1.279130I$ $a=\ \ 0.256462+0.472498I$ $b=\ \ 0.378917-0.523548I$	$-2.11329+6.53754I$	$-2.93657-5.70476I$
$u=-0.238208-1.279130I$ $a=\ \ 0.256462-0.472498I$ $b=\ \ 0.378917+0.523548I$	$-2.11329-6.53754I$	$-2.93657+5.70476I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.943992+0.928790I$ $a=-0.161234+0.776586I$ $b=\ \ 1.48226-0.39919I$	$-9.59239+4.85624I$	$-9.87202-2.24813I$
$u=-0.943992-0.928790I$ $a=-0.161234-0.776586I$ $b=\ \ 1.48226+0.39919I$	$-9.59239-4.85624I$	$-9.87202+2.24813I$
$u=\ \ 0.382414+0.542277I$ $a=\ \ 0.290004-0.853492I$ $b=-1.25094+0.68932I$	$-0.681831-0.856086I$	$-6.33441+8.31733I$
$u=\ \ 0.382414-0.542277I$ $a=\ \ 0.290004+0.853492I$ $b=-1.25094-0.68932I$	$-0.681831+0.856086I$	$-6.33441-8.31733I$
$u=-0.071184+0.625824I$ $a=\ \ 1.41490-1.09388I$ $b=\ \ 0.250613+0.951659I$	$1.25984+3.18601I$	$-2.50556-8.38071I$
$u=-0.071184-0.625824I$ $a=\ \ 1.41490+1.09388I$ $b=\ \ 0.250613-0.951659I$	$1.25984-3.18601I$	$-2.50556+8.38071I$
$u=-0.058505+0.569575I$ $a=-3.03288-1.16293I$ $b=\ \ 0.236963+1.167790I$	$-5.17305-5.14099I$	$-6.31641+6.34700I$
$u=-0.058505-0.569575I$ $a=-3.03288+1.16293I$ $b=\ \ 0.236963-1.167790I$	$-5.17305+5.14099I$	$-6.31641-6.34700I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{18}-13u^{17}+\cdots-88u+11)(u^{66}+6u^{65}+\cdots+5840u+651)$
c_2	$(u^{18}+5u^{17}+\cdots+2u+1)(u^{66}+8u^{65}+\cdots+244u-37)$
c_3	$(u^{18}+u^{17}+\cdots+6u^2+1)(u^{66}-34u^{64}+\cdots-1660u-803)$
c_4	$(u^{18}-u^{17}+\cdots+u^2+1)(u^{66}+8u^{64}+\cdots+2550u-731)$
c_5, c_6	$(u^{18}-10u^{16}+\cdots-2u+1)(u^{66}+u^{65}+\cdots+14u-3)$
c_7	$(u^{18}+u^{17}+\cdots+8u^2+1)(u^{66}+8u^{64}+\cdots+14u+1)$
c_8	$(u^{18}+u^{16}+\cdots+u+1)(u^{66}+u^{65}+\cdots-979u-167)$
c_9	$(u^{18}-10u^{16}+\cdots+2u+1)(u^{66}+u^{65}+\cdots+14u-3)$
c_{10}	$(u^{18}+3u^{17}+\cdots-3u+1)(u^{66}+27u^{64}+\cdots-2100877u+215861)$
c_{11}, c_{12}	$(u^{18}-u^{17}+\cdots+8u^2+1)(u^{66}+8u^{64}+\cdots+14u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{18}-7y^{17}+\cdots+968y+121)$ $\cdot(y^{66}-70y^{65}+\cdots-19635172y+423801)$
c_2	$(y^{18}+y^{17}+\cdots+2y+1)(y^{66}+18y^{65}+\cdots-28826y+1369)$
c_3	$(y^{18}-9y^{17}+\cdots+12y+1)$ $\cdot(y^{66}-68y^{65}+\cdots+49426552y+644809)$
c_4	$(y^{18}-5y^{17}+\cdots+2y+1)(y^{66}+16y^{65}+\cdots+1.99816\times10^{7}y+534361)$
c_5, c_6, c_9	$(y^{18}-20y^{17}+\cdots+16y+1)(y^{66}-71y^{65}+\cdots-304y+9)$
c_7, c_{11}, c_{12}	$(y^{18}+11y^{17}+\cdots+16y+1)(y^{66}+16y^{65}+\cdots-28y+1)$
c_8	$(y^{18}+2y^{17}+\cdots-5y+1)(y^{66}-17y^{65}+\cdots-794781y+27889)$
c_{10}	$(y^{18}+13y^{17}+\cdots-7y+1)$ $\cdot(y^{66}+54y^{65}+\cdots-373655164727y+46595971321)$