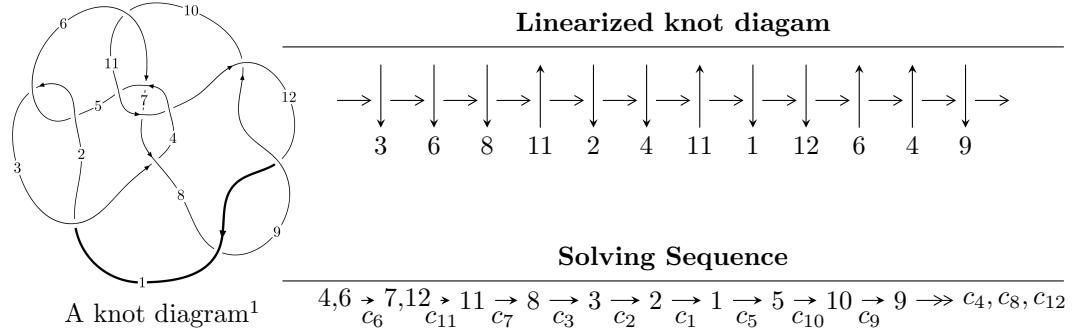


$12n_{0324}$  ( $K12n_{0324}$ )



### Ideals for irreducible components<sup>2</sup> of $X_{\text{par}}$

$$\begin{aligned}
 I_1^u &= \langle -6.20623 \times 10^{189} u^{50} + 1.91950 \times 10^{190} u^{49} + \dots + 1.83109 \times 10^{190} b - 2.76698 \times 10^{190}, \\
 &\quad 6.53118 \times 10^{190} u^{50} - 2.00240 \times 10^{191} u^{49} + \dots + 1.83109 \times 10^{190} a + 4.17386 \times 10^{191}, u^{51} - 3u^{50} + \dots + 21u \\
 I_2^u &= \langle -15199u^{17} - 83246u^{16} + \dots + b - 28434, 13363u^{17} + 74911u^{16} + \dots + a + 32129, \\
 &\quad u^{18} + 6u^{17} + \dots + 16u + 1 \rangle
 \end{aligned}$$

\* 2 irreducible components of  $\dim_{\mathbb{C}} = 0$ , with total 69 representations.

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<sup>1</sup>The image of knot diagram is generated by the software “**Draw programme**” developed by Andrew Bartholomew(<http://www.layer8.co.uk/math/draw/index.htm#Running-draw>), where we modified some parts for our purpose(<https://github.com/CATsTAILs/LinksPainter>).

<sup>2</sup>All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\text{I. } I_1^u = \langle -6.21 \times 10^{189} u^{50} + 1.92 \times 10^{190} u^{49} + \cdots + 1.83 \times 10^{190} b - 2.77 \times 10^{190}, \ 6.53 \times 10^{190} u^{50} - 2.00 \times 10^{191} u^{49} + \cdots + 1.83 \times 10^{190} a + 4.17 \times 10^{191}, \ u^{51} - 3u^{50} + \cdots + 21u + 1 \rangle$$

(i) **Arc colorings**

$$\begin{aligned} a_4 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_6 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 1 \\ u^2 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} -3.56682u^{50} + 10.9355u^{49} + \cdots - 381.856u - 22.7943 \\ 0.338936u^{50} - 1.04828u^{49} + \cdots + 35.0303u + 1.51111 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -3.56682u^{50} + 10.9355u^{49} + \cdots - 381.856u - 22.7943 \\ 0.367596u^{50} - 1.14233u^{49} + \cdots + 33.6608u + 1.27604 \end{pmatrix} \\ a_8 &= \begin{pmatrix} 1.31856u^{50} - 4.24593u^{49} + \cdots + 43.2461u - 7.28846 \\ 0.372098u^{50} - 1.15390u^{49} + \cdots + 41.7658u + 3.50605 \end{pmatrix} \\ a_3 &= \begin{pmatrix} 2.56187u^{50} - 8.01615u^{49} + \cdots + 312.685u + 11.1314 \\ -0.123273u^{50} + 0.394024u^{49} + \cdots - 16.0948u + 0.114225 \end{pmatrix} \\ a_2 &= \begin{pmatrix} 2.43859u^{50} - 7.62212u^{49} + \cdots + 296.590u + 11.2457 \\ -0.123273u^{50} + 0.394024u^{49} + \cdots - 16.0948u + 0.114225 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -0.386563u^{50} + 1.15851u^{49} + \cdots - 202.479u - 17.3283 \\ 0.237140u^{50} - 0.750279u^{49} + \cdots + 32.0577u + 2.33690 \end{pmatrix} \\ a_5 &= \begin{pmatrix} -2.62715u^{50} + 8.16557u^{49} + \cdots - 395.092u - 18.3358 \\ 0.245732u^{50} - 0.780842u^{49} + \cdots + 33.6386u + 1.03443 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -3.93442u^{50} + 12.0779u^{49} + \cdots - 415.517u - 24.0704 \\ 0.367596u^{50} - 1.14233u^{49} + \cdots + 33.6608u + 1.27604 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -1.41365u^{50} + 4.64782u^{49} + \cdots + 32.0023u + 3.74234 \\ -0.0397767u^{50} + 0.116546u^{49} + \cdots - 24.0454u - 1.81099 \end{pmatrix} \end{aligned}$$

(ii) **Obstruction class** = -1

(iii) **Cusp Shapes** =  $-2.64179u^{50} + 8.09527u^{49} + \cdots - 400.109u - 30.6870$

**(iv) u-Polynomials at the component**

Crossings	u-Polynomials at each crossing
$c_1$	$u^{51} + 29u^{50} + \cdots - 31u + 49$
$c_2, c_5$	$u^{51} + 3u^{50} + \cdots + 33u + 7$
$c_3$	$u^{51} + u^{50} + \cdots - 133u + 163$
$c_4, c_{11}$	$u^{51} - u^{50} + \cdots - 3u + 1$
$c_6$	$u^{51} - 3u^{50} + \cdots + 21u + 1$
$c_7$	$u^{51} - 2u^{50} + \cdots + 6290u + 161$
$c_8, c_9, c_{12}$	$u^{51} - 4u^{50} + \cdots + 131u - 29$
$c_{10}$	$u^{51} + 33u^{49} + \cdots + 63366u + 32041$

**(v) Riley Polynomials at the component**

Crossings	Riley Polynomials at each crossing
$c_1$	$y^{51} - y^{50} + \cdots + 295745y - 2401$
$c_2, c_5$	$y^{51} - 29y^{50} + \cdots - 31y - 49$
$c_3$	$y^{51} + 19y^{50} + \cdots - 159329y - 26569$
$c_4, c_{11}$	$y^{51} + 67y^{50} + \cdots + 111y - 1$
$c_6$	$y^{51} - 87y^{50} + \cdots - 61y - 1$
$c_7$	$y^{51} + 68y^{50} + \cdots + 46092006y - 25921$
$c_8, c_9, c_{12}$	$y^{51} + 46y^{50} + \cdots + 14783y - 841$
$c_{10}$	$y^{51} + 66y^{50} + \cdots - 134123626y - 1026625681$

**(vi) Complex Volumes and Cusp Shapes**

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.438854 + 0.881387I$		
$a = 0.802989 + 0.488950I$	$2.55303 + 5.62854I$	0
$b = 1.46263 + 0.44970I$		
$u = 0.438854 - 0.881387I$		
$a = 0.802989 - 0.488950I$	$2.55303 - 5.62854I$	0
$b = 1.46263 - 0.44970I$		
$u = 0.786917 + 0.547490I$		
$a = 1.231510 + 0.622312I$	$5.38314 + 2.25660I$	0
$b = -0.561675 - 0.635936I$		
$u = 0.786917 - 0.547490I$		
$a = 1.231510 - 0.622312I$	$5.38314 - 2.25660I$	0
$b = -0.561675 + 0.635936I$		
$u = -0.969635 + 0.549105I$		
$a = 0.592870 - 0.730545I$	$2.80334 + 0.19977I$	0
$b = 1.099540 + 0.169847I$		
$u = -0.969635 - 0.549105I$		
$a = 0.592870 + 0.730545I$	$2.80334 - 0.19977I$	0
$b = 1.099540 - 0.169847I$		
$u = -0.258956 + 1.084080I$		
$a = -0.0078550 + 0.1186930I$	$2.08270 + 2.42338I$	0
$b = 0.680266 + 0.175141I$		
$u = -0.258956 - 1.084080I$		
$a = -0.0078550 - 0.1186930I$	$2.08270 - 2.42338I$	0
$b = 0.680266 - 0.175141I$		
$u = -0.877771 + 0.053196I$		
$a = 1.06003 - 0.99974I$	$2.86052 + 0.92213I$	$-4.00000 + 0.I$
$b = -0.050000 + 0.341986I$		
$u = -0.877771 - 0.053196I$		
$a = 1.06003 + 0.99974I$	$2.86052 - 0.92213I$	$-4.00000 + 0.I$
$b = -0.050000 - 0.341986I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.077227 + 0.787735I$	$-1.082690 - 0.753222I$	$-8.27224 - 0.58913I$
$a = -1.39631 + 0.29538I$		
$b = 0.405257 - 0.172699I$		
$u = 0.077227 - 0.787735I$	$-1.082690 + 0.753222I$	$-8.27224 + 0.58913I$
$a = -1.39631 - 0.29538I$		
$b = 0.405257 + 0.172699I$		
$u = -0.371822 + 0.643704I$	$-1.31122 + 2.27509I$	$-10.03353 - 3.12250I$
$a = -1.319030 + 0.489182I$		
$b = -1.058190 - 0.552894I$		
$u = -0.371822 - 0.643704I$	$-1.31122 - 2.27509I$	$-10.03353 + 3.12250I$
$a = -1.319030 - 0.489182I$		
$b = -1.058190 + 0.552894I$		
$u = 0.415418 + 1.187680I$	$7.01209 + 0.55331I$	0
$a = 0.210614 + 0.007241I$		
$b = -0.711873 - 0.851088I$		
$u = 0.415418 - 1.187680I$	$7.01209 - 0.55331I$	0
$a = 0.210614 - 0.007241I$		
$b = -0.711873 + 0.851088I$		
$u = -0.851182 + 0.945181I$	$1.61849 - 3.97257I$	0
$a = 0.492401 - 0.719354I$		
$b = -0.574356 + 0.893531I$		
$u = -0.851182 - 0.945181I$	$1.61849 + 3.97257I$	0
$a = 0.492401 + 0.719354I$		
$b = -0.574356 - 0.893531I$		
$u = -0.654550$		
$a = -0.815626$	$-1.51224$	$-6.39690$
$b = -0.0235623$		
$u = -0.61210 + 1.42769I$	$5.29873 + 5.39295I$	0
$a = -0.0766712 - 0.0666805I$		
$b = -0.855685 + 0.583788I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.61210 - 1.42769I$		
$a = -0.0766712 + 0.0666805I$	$5.29873 - 5.39295I$	0
$b = -0.855685 - 0.583788I$		
$u = 0.244067 + 0.211790I$		
$a = 3.58624 - 0.14006I$	$6.22807 + 3.03641I$	$-0.15194 - 4.08278I$
$b = -0.172244 - 0.891038I$		
$u = 0.244067 - 0.211790I$		
$a = 3.58624 + 0.14006I$	$6.22807 - 3.03641I$	$-0.15194 + 4.08278I$
$b = -0.172244 + 0.891038I$		
$u = -0.052211 + 0.243333I$		
$a = -1.65333 + 1.57397I$	$-0.123994 + 1.016060I$	$-2.35884 - 6.62848I$
$b = 0.032030 + 0.489627I$		
$u = -0.052211 - 0.243333I$		
$a = -1.65333 - 1.57397I$	$-0.123994 - 1.016060I$	$-2.35884 + 6.62848I$
$b = 0.032030 - 0.489627I$		
$u = -0.153372 + 0.111375I$		
$a = 2.84799 + 0.60731I$	$-1.19162 + 1.61010I$	$-0.97639 + 4.58807I$
$b = 0.517369 + 1.121390I$		
$u = -0.153372 - 0.111375I$		
$a = 2.84799 - 0.60731I$	$-1.19162 - 1.61010I$	$-0.97639 - 4.58807I$
$b = 0.517369 - 1.121390I$		
$u = 0.007539 + 0.153031I$		
$a = -5.36804 + 7.36280I$	$3.36883 + 8.08804I$	$-4.16795 - 6.45391I$
$b = 0.090420 - 0.966899I$		
$u = 0.007539 - 0.153031I$		
$a = -5.36804 - 7.36280I$	$3.36883 - 8.08804I$	$-4.16795 + 6.45391I$
$b = 0.090420 + 0.966899I$		
$u = -0.0981206 + 0.0761409I$		
$a = -2.13969 - 7.63551I$	$-2.72745 + 3.79308I$	$-7.08139 - 6.39060I$
$b = -0.180819 + 1.098890I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.0981206 - 0.0761409I$		
$a = -2.13969 + 7.63551I$	$-2.72745 - 3.79308I$	$-7.08139 + 6.39060I$
$b = -0.180819 - 1.098890I$		
$u = 2.03972 + 0.34818I$		
$a = -0.167321 - 0.858121I$	$-7.53123 - 4.56112I$	0
$b = 0.24093 + 2.09041I$		
$u = 2.03972 - 0.34818I$		
$a = -0.167321 + 0.858121I$	$-7.53123 + 4.56112I$	0
$b = 0.24093 - 2.09041I$		
$u = 2.11807 + 0.20852I$		
$a = 0.111419 + 0.870257I$	$-9.45111 - 1.99019I$	0
$b = 0.53451 - 1.37759I$		
$u = 2.11807 - 0.20852I$		
$a = 0.111419 - 0.870257I$	$-9.45111 + 1.99019I$	0
$b = 0.53451 + 1.37759I$		
$u = 2.14783 + 0.07904I$		
$a = 0.027350 + 0.853045I$	$-12.63600 - 1.06445I$	0
$b = -0.32027 - 1.82960I$		
$u = 2.14783 - 0.07904I$		
$a = 0.027350 - 0.853045I$	$-12.63600 + 1.06445I$	0
$b = -0.32027 + 1.82960I$		
$u = 2.09075 + 0.50266I$		
$a = -0.344685 - 0.686017I$	$-7.39570 + 2.33947I$	0
$b = 0.07196 + 1.68618I$		
$u = 2.09075 - 0.50266I$		
$a = -0.344685 + 0.686017I$	$-7.39570 - 2.33947I$	0
$b = 0.07196 - 1.68618I$		
$u = -2.16315 + 0.30765I$		
$a = -0.100617 + 0.731102I$	$-5.84292 + 0.77536I$	0
$b = -0.04164 - 2.25566I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -2.16315 - 0.30765I$		
$a = -0.100617 - 0.731102I$	$-5.84292 - 0.77536I$	0
$b = -0.04164 + 2.25566I$		
$u = -2.24014 + 0.35466I$		
$a = 0.021038 - 0.775624I$	$-2.40989 + 7.37799I$	0
$b = 0.69469 + 1.78191I$		
$u = -2.24014 - 0.35466I$		
$a = 0.021038 + 0.775624I$	$-2.40989 - 7.37799I$	0
$b = 0.69469 - 1.78191I$		
$u = -2.22716 + 0.44704I$		
$a = -0.192890 + 0.625827I$	$-5.46694 + 1.77932I$	0
$b = -0.19805 - 1.86310I$		
$u = -2.22716 - 0.44704I$		
$a = -0.192890 - 0.625827I$	$-5.46694 - 1.77932I$	0
$b = -0.19805 + 1.86310I$		
$u = -2.28681 + 0.02141I$		
$a = 0.069554 + 0.723390I$	$-7.57553 + 3.10359I$	0
$b = -0.35195 - 1.92261I$		
$u = -2.28681 - 0.02141I$		
$a = 0.069554 - 0.723390I$	$-7.57553 - 3.10359I$	0
$b = -0.35195 + 1.92261I$		
$u = 2.29535 + 0.30641I$		
$a = -0.050327 + 0.786971I$	$-5.2040 - 14.0594I$	0
$b = 0.58797 - 1.96230I$		
$u = 2.29535 - 0.30641I$		
$a = -0.050327 - 0.786971I$	$-5.2040 + 14.0594I$	0
$b = 0.58797 + 1.96230I$		
$u = 2.32797 + 0.06553I$		
$a = 0.170579 + 0.730407I$	$-10.44840 + 8.57270I$	0
$b = -0.32905 - 1.92841I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 2.32797 - 0.06553I$		
$a = 0.170579 - 0.730407I$	$-10.44840 - 8.57270I$	0
$b = -0.32905 + 1.92841I$		

$$\text{II. } I_2^u = \langle -15199u^{17} - 83246u^{16} + \dots + b - 28434, 13363u^{17} + 74911u^{16} + \dots + a + 32129, u^{18} + 6u^{17} + \dots + 16u + 1 \rangle$$

(i) **Arc colorings**

$$\begin{aligned} a_4 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_6 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 1 \\ u^2 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} -13363u^{17} - 74911u^{16} + \dots - 440720u - 32129 \\ 15199u^{17} + 83246u^{16} + \dots + 403343u + 28434 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -13363u^{17} - 74911u^{16} + \dots - 440720u - 32129 \\ 13235u^{17} + 72159u^{16} + \dots + 332434u + 23167 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -16u^{17} - 94u^{16} + \dots - 1251u - 125 \\ 16384u^{17} + 90112u^{16} + \dots + 458752u + 32767 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -93u^{17} - 558u^{16} + \dots - 6698u - 592 \\ -u^{17} - 6u^{16} + \dots - 115u - 15 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -94u^{17} - 564u^{16} + \dots - 6813u - 607 \\ -u^{17} - 6u^{16} + \dots - 115u - 15 \end{pmatrix} \\ a_1 &= \begin{pmatrix} 1589u^{17} + 9128u^{16} + \dots + 70803u + 5487 \\ 95u^{17} + 557u^{16} + \dots + 5933u + 515 \end{pmatrix} \\ a_5 &= \begin{pmatrix} -513u^{17} - 2984u^{16} + \dots - 27756u - 2291 \\ -14u^{17} - 83u^{16} + \dots - 1120u - 110 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -26598u^{17} - 147070u^{16} + \dots - 773154u - 55296 \\ 13235u^{17} + 72159u^{16} + \dots + 332434u + 23167 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -24899u^{17} - 137296u^{16} + \dots - 695183u - 49170 \\ 13235u^{17} + 72171u^{16} + \dots + 333330u + 23261 \end{pmatrix} \end{aligned}$$

(ii) **Obstruction class = 1**

(iii) **Cusp Shapes**

$$\begin{aligned} &= 96456u^{17} + 526448u^{16} + 968430u^{15} - 43279u^{14} - 4993167u^{13} - 14847798u^{12} - \\ &21267959u^{11} - 7843139u^{10} + 43624726u^9 + 131260980u^8 + 221053250u^7 + 262385524u^6 + \\ &225728266u^5 + 138033421u^4 + 57916786u^3 + 15777654u^2 + 2510027u + 177106 \end{aligned}$$

**(iv) u-Polynomials at the component**

Crossings	u-Polynomials at each crossing
$c_1$	$u^{18} - 12u^{17} + \cdots - 12u + 1$
$c_2$	$u^{18} + 2u^{17} + \cdots + 2u + 1$
$c_3$	$u^{18} + 6u^{16} + \cdots - 6u + 1$
$c_4$	$u^{18} + 10u^{16} + \cdots + 17u^2 + 1$
$c_5$	$u^{18} - 2u^{17} + \cdots - 2u + 1$
$c_6$	$u^{18} + 6u^{17} + \cdots + 16u + 1$
$c_7$	$u^{18} - u^{17} + \cdots - u + 1$
$c_8, c_9$	$u^{18} - 3u^{17} + \cdots - 4u + 1$
$c_{10}$	$u^{18} + u^{17} + \cdots + u + 1$
$c_{11}$	$u^{18} + 10u^{16} + \cdots + 17u^2 + 1$
$c_{12}$	$u^{18} + 3u^{17} + \cdots + 4u + 1$

**(v) Riley Polynomials at the component**

Crossings	Riley Polynomials at each crossing
$c_1$	$y^{18} - 8y^{16} + \cdots - 8y + 1$
$c_2, c_5$	$y^{18} - 12y^{17} + \cdots - 12y + 1$
$c_3$	$y^{18} + 12y^{17} + \cdots - 6y + 1$
$c_4, c_{11}$	$y^{18} + 20y^{17} + \cdots + 34y + 1$
$c_6$	$y^{18} - 10y^{17} + \cdots - 26y + 1$
$c_7$	$y^{18} + 13y^{17} + \cdots - 5y + 1$
$c_8, c_9, c_{12}$	$y^{18} + 19y^{17} + \cdots + 34y + 1$
$c_{10}$	$y^{18} + 7y^{17} + \cdots - 9y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.642965 + 1.138500I$		
$a = -0.809556 - 0.016966I$	$6.64743 - 1.50205I$	0
$b = -0.104175 - 0.781798I$		
$u = -0.642965 - 1.138500I$		
$a = -0.809556 + 0.016966I$	$6.64743 + 1.50205I$	0
$b = -0.104175 + 0.781798I$		
$u = -0.586828 + 0.199257I$		
$a = -1.39182 + 1.34971I$	$6.10975 - 2.66232I$	$2.22310 + 5.30109I$
$b = 0.880804 - 0.592549I$		
$u = -0.586828 - 0.199257I$		
$a = -1.39182 - 1.34971I$	$6.10975 + 2.66232I$	$2.22310 - 5.30109I$
$b = 0.880804 + 0.592549I$		
$u = 0.12002 + 1.43750I$		
$a = -0.563405 + 0.344470I$	$5.29038 + 6.84249I$	0
$b = -0.585179 + 0.241540I$		
$u = 0.12002 - 1.43750I$		
$a = -0.563405 - 0.344470I$	$5.29038 - 6.84249I$	0
$b = -0.585179 - 0.241540I$		
$u = -0.533613 + 0.020740I$		
$a = 0.029715 - 0.541718I$	$-1.38579 - 2.18536I$	$-5.51806 + 7.75600I$
$b = -0.493263 + 0.922302I$		
$u = -0.533613 - 0.020740I$		
$a = 0.029715 + 0.541718I$	$-1.38579 + 2.18536I$	$-5.51806 - 7.75600I$
$b = -0.493263 - 0.922302I$		
$u = -0.483081 + 0.122779I$		
$a = 0.22219 - 1.99454I$	$-0.12655 - 1.97803I$	$-2.99483 + 2.76111I$
$b = -0.880434 + 0.479597I$		
$u = -0.483081 - 0.122779I$		
$a = 0.22219 + 1.99454I$	$-0.12655 + 1.97803I$	$-2.99483 - 2.76111I$
$b = -0.880434 - 0.479597I$		

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.30885 + 1.52377I$		
$a = 0.446642 - 0.096804I$	$1.24279 + 2.46392I$	0
$b = 0.487692 + 0.273624I$		
$u = -0.30885 - 1.52377I$		
$a = 0.446642 + 0.096804I$	$1.24279 - 2.46392I$	0
$b = 0.487692 - 0.273624I$		
$u = -0.413975 + 0.113860I$		
$a = 0.76007 + 3.22513I$	$3.66442 - 2.08584I$	$-0.82702 + 3.16487I$
$b = 0.849984 - 0.349023I$		
$u = -0.413975 - 0.113860I$		
$a = 0.76007 - 3.22513I$	$3.66442 + 2.08584I$	$-0.82702 - 3.16487I$
$b = 0.849984 + 0.349023I$		
$u = 2.09428 + 0.29167I$		
$a = 0.161339 + 0.853648I$	$-10.12730 - 0.84676I$	0
$b = 0.18266 - 1.56242I$		
$u = 2.09428 - 0.29167I$		
$a = 0.161339 - 0.853648I$	$-10.12730 + 0.84676I$	0
$b = 0.18266 + 1.56242I$		
$u = -2.24499 + 0.38125I$		
$a = 0.144822 - 0.657660I$	$-6.38032 + 1.49135I$	0
$b = 0.16191 + 2.21998I$		
$u = -2.24499 - 0.38125I$		
$a = 0.144822 + 0.657660I$	$-6.38032 - 1.49135I$	0
$b = 0.16191 - 2.21998I$		

### III. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$(u^{18} - 12u^{17} + \dots - 12u + 1)(u^{51} + 29u^{50} + \dots - 31u + 49)$
$c_2$	$(u^{18} + 2u^{17} + \dots + 2u + 1)(u^{51} + 3u^{50} + \dots + 33u + 7)$
$c_3$	$(u^{18} + 6u^{16} + \dots - 6u + 1)(u^{51} + u^{50} + \dots - 133u + 163)$
$c_4$	$(u^{18} + 10u^{16} + \dots + 17u^2 + 1)(u^{51} - u^{50} + \dots - 3u + 1)$
$c_5$	$(u^{18} - 2u^{17} + \dots - 2u + 1)(u^{51} + 3u^{50} + \dots + 33u + 7)$
$c_6$	$(u^{18} + 6u^{17} + \dots + 16u + 1)(u^{51} - 3u^{50} + \dots + 21u + 1)$
$c_7$	$(u^{18} - u^{17} + \dots - u + 1)(u^{51} - 2u^{50} + \dots + 6290u + 161)$
$c_8, c_9$	$(u^{18} - 3u^{17} + \dots - 4u + 1)(u^{51} - 4u^{50} + \dots + 131u - 29)$
$c_{10}$	$(u^{18} + u^{17} + \dots + u + 1)(u^{51} + 33u^{49} + \dots + 63366u + 32041)$
$c_{11}$	$(u^{18} + 10u^{16} + \dots + 17u^2 + 1)(u^{51} - u^{50} + \dots - 3u + 1)$
$c_{12}$	$(u^{18} + 3u^{17} + \dots + 4u + 1)(u^{51} - 4u^{50} + \dots + 131u - 29)$

#### IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1$	$(y^{18} - 8y^{16} + \dots - 8y + 1)(y^{51} - y^{50} + \dots + 295745y - 2401)$
$c_2, c_5$	$(y^{18} - 12y^{17} + \dots - 12y + 1)(y^{51} - 29y^{50} + \dots - 31y - 49)$
$c_3$	$(y^{18} + 12y^{17} + \dots - 6y + 1)(y^{51} + 19y^{50} + \dots - 159329y - 26569)$
$c_4, c_{11}$	$(y^{18} + 20y^{17} + \dots + 34y + 1)(y^{51} + 67y^{50} + \dots + 111y - 1)$
$c_6$	$(y^{18} - 10y^{17} + \dots - 26y + 1)(y^{51} - 87y^{50} + \dots - 61y - 1)$
$c_7$	$(y^{18} + 13y^{17} + \dots - 5y + 1)(y^{51} + 68y^{50} + \dots + 4.60920 \times 10^7 y - 25921)$
$c_8, c_9, c_{12}$	$(y^{18} + 19y^{17} + \dots + 34y + 1)(y^{51} + 46y^{50} + \dots + 14783y - 841)$
$c_{10}$	$(y^{18} + 7y^{17} + \dots - 9y + 1)$ $\cdot (y^{51} + 66y^{50} + \dots - 134123626y - 1026625681)$