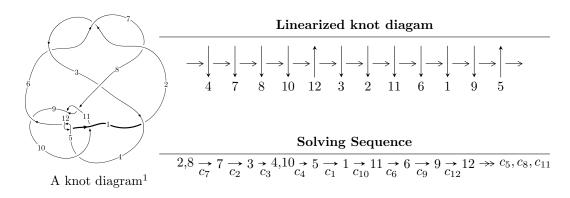
$12a_{1038} (K12a_{1038})$



Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -3.62076 \times 10^{53} u^{97} + 8.81180 \times 10^{53} u^{96} + \dots + 8.81449 \times 10^{53} b + 4.33084 \times 10^{53}, \\ 1.67240 \times 10^{54} u^{97} - 4.07185 \times 10^{54} u^{96} + \dots + 8.81449 \times 10^{53} a - 2.98740 \times 10^{54}, \ u^{98} - 3u^{97} + \dots - 5u + 10^{54} u^{98} + 3u^{98} + 3u^{98$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 98 representations.

¹The 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.

 $\begin{matrix} \text{I.} \\ I_1^u = \langle -3.62 \times 10^{53} u^{97} + 8.81 \times 10^{53} u^{96} + \dots + 8.81 \times 10^{53} b + 4.33 \times 10^{53}, \ 1.67 \times 10^{54} u^{97} - 4.07 \times 10^{54} u^{96} + \dots + 8.81 \times 10^{53} a - 2.99 \times 10^{54}, \ u^{98} - 3u^{97} + \dots - 5u + 1 \rangle \end{matrix}$

(i) Arc colorings

$$a_{2} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{8} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{7} = \begin{pmatrix} 1 \\ -u^{2} \end{pmatrix}$$

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

$$a_{4} = \begin{pmatrix} -1.89733u^{97} + 4.61949u^{96} + \dots - 13.1123u + 3.38919 \\ 0.410774u^{97} - 0.999695u^{96} + \dots + 4.99129u - 0.491331 \end{pmatrix}$$

$$a_{5} = \begin{pmatrix} 0.222953u^{97} - 1.13842u^{96} + \dots + 1.53433u - 1.07411 \\ 0.475801u^{97} - 1.08428u^{96} + \dots + 1.54473u - 0.514952 \end{pmatrix}$$

$$a_{1} = \begin{pmatrix} u^{7} + 4u^{5} + 4u^{3} \\ -u^{7} - 3u^{5} - 2u^{3} + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.469168u^{97} + 0.658638u^{96} + \dots - 3.66130u + 1.52455 \\ -0.262625u^{97} + 0.897029u^{96} + \dots - 3.81810u + 1.84336 \end{pmatrix}$$

$$a_{6} = \begin{pmatrix} u^{2} + 1 \\ -u^{4} - 2u^{2} \end{pmatrix}$$

$$a_{9} = \begin{pmatrix} -0.484597u^{97} + 0.957708u^{96} + \dots - 6.36097u + 3.14188 \\ -0.393812u^{97} + 1.22529u^{96} + \dots - 4.19603u + 1.78580 \end{pmatrix}$$

$$\begin{pmatrix} 0.00745162u^{97} - 0.615653u^{96} + \dots + 4.96278u - 2.02379 \\ 0.381053u^{97} - 0.953602u^{96} + \dots + 4.9502513u + 0.295011 \end{pmatrix}$$

- (ii) Obstruction class = -1
- (iii) Cusp Shapes = $1.63646u^{97} 5.49263u^{96} + \cdots + 8.71271u 12.4499$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{98} - 19u^{97} + \dots - 841339u + 59603$
c_2, c_6, c_7	$u^{98} + 3u^{97} + \dots + 5u + 1$
<i>c</i> ₃	$u^{98} - 3u^{97} + \dots + 595u + 425$
c_4	$u^{98} - u^{97} + \dots - u - 1$
c_5, c_{12}	$u^{98} - 3u^{97} + \dots + u + 1$
c_8, c_{11}	$u^{98} - u^{97} + \dots - 33u - 1$
<i>c</i> 9	$u^{98} + 5u^{97} + \dots - 3041767u - 195991$
c_{10}	$u^{98} + 9u^{97} + \dots + 4943u - 137$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{98} + 45y^{97} + \dots + 84576889997y + 3552517609$
c_2, c_6, c_7	$y^{98} + 89y^{97} + \dots - 7y + 1$
c_3	$y^{98} + 13y^{97} + \dots + 6423025y + 180625$
c_4	$y^{98} - 3y^{97} + \dots - 99y + 1$
c_5, c_{12}	$y^{98} + 73y^{97} + \dots - 7y + 1$
c_8, c_{11}	$y^{98} - 67y^{97} + \dots - 179y + 1$
c_9	$y^{98} - 203y^{97} + \dots - 3248967720299y + 38412472081$
c_{10}	$y^{98} + 137y^{97} + \dots - 6924923y + 18769$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.065339 + 1.097010I		
a = -1.324380 - 0.441285I	-4.40512 - 2.11265I	0
b = 1.46093 + 1.29019I		
u = 0.065339 - 1.097010I		
a = -1.324380 + 0.441285I	-4.40512 + 2.11265I	0
b = 1.46093 - 1.29019I		
u = 0.612404 + 0.652469I		
a = -0.252396 - 0.753912I	-3.29048 - 3.02837I	0
b = -0.216088 + 0.660826I		
u = 0.612404 - 0.652469I		
a = -0.252396 + 0.753912I	-3.29048 + 3.02837I	0
b = -0.216088 - 0.660826I		
u = 0.800888 + 0.357291I		
a = 0.253454 + 0.756910I	-4.30667 - 1.74398I	0
b = 0.106025 - 0.595292I		
u = 0.800888 - 0.357291I		
a = 0.253454 - 0.756910I	-4.30667 + 1.74398I	0
b = 0.106025 + 0.595292I		
u = -0.038346 + 1.161800I		
a = -1.262120 - 0.527027I	-0.080038 + 0.981236I	0
b = 0.316673 - 1.090610I		
u = -0.038346 - 1.161800I		
a = -1.262120 + 0.527027I	-0.080038 - 0.981236I	0
b = 0.316673 + 1.090610I		
u = -0.468868 + 0.684398I		
a = -1.050430 - 0.676356I	0.46550 - 4.30305I	-7.01592 + 4.36620I
b = 1.047240 - 0.388987I		
u = -0.468868 - 0.684398I		
a = -1.050430 + 0.676356I	0.46550 + 4.30305I	-7.01592 - 4.36620I
b = 1.047240 + 0.388987I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.820805		
a = -0.384972	-4.50628	-26.0090
b = -0.00973519		
u = 0.486220 + 0.652272I		
a = -2.00701 + 0.85445I	-4.55395 + 9.86790I	-10.03674 - 4.17482I
b = 1.61190 + 0.78207I		
u = 0.486220 - 0.652272I		
a = -2.00701 - 0.85445I	-4.55395 - 9.86790I	-10.03674 + 4.17482I
b = 1.61190 - 0.78207I		
u = -0.741511 + 0.323631I		
a = -1.21304 - 1.63056I	-0.79939 + 8.54144I	-9.35248 - 8.62618I
b = 1.42634 + 0.75096I		
u = -0.741511 - 0.323631I		
a = -1.21304 + 1.63056I	-0.79939 - 8.54144I	-9.35248 + 8.62618I
b = 1.42634 - 0.75096I		
u = -0.154621 + 1.182450I		
a = 0.442376 + 0.325025I	-0.62174 + 5.21555I	0
b = -0.24214 - 1.49177I		
u = -0.154621 - 1.182450I		
a = 0.442376 - 0.325025I	-0.62174 - 5.21555I	0
b = -0.24214 + 1.49177I		
u = 0.734303 + 0.335173I		
a = -1.56251 + 2.65545I	-5.6940 - 14.0982I	-12.0008 + 9.3017I
b = 1.95978 - 1.35725I		
u = 0.734303 - 0.335173I		
a = -1.56251 - 2.65545I	-5.6940 + 14.0982I	-12.0008 - 9.3017I
b = 1.95978 + 1.35725I		
u = 0.347846 + 1.150340I		
a = -0.326146 + 0.013567I	-0.98524 - 4.23518I	0
b = 0.146982 - 0.323227I		

$\begin{array}{c} u = 0.347846 - 1.150340I \\ a = -0.326146 - 0.013567I \\ b = 0.146982 + 0.323227I \\ \hline \\ u = -0.298674 + 1.170600I \\ a = -0.755088 + 0.161129I \\ b = 0.215537 + 0.593171I \\ \hline \\ u = -0.298674 - 1.170600I \\ a = -0.755088 - 0.161129I \\ b = 0.215537 - 0.593171I \\ \hline \\ u = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I \\ b = 1.41833 - 0.53377I \\ \hline \\ u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I \\ b = 1.41833 + 0.53377I \\ \hline \\ u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I \\ u = 0.113127 + 0.821566I \\ \hline \\ u = 0.113127 - 0.821566I \\ \hline \\ u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ b = -0.142569 - 0.072822I \\ \hline \\ u = 0.67264 + 0.02327I \\ \hline \end{array}$	Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$\begin{array}{c} b = 0.146982 + 0.323227I \\ u = -0.298674 + 1.170600I \\ a = -0.755088 + 0.161129I \\ -6.09100 + 10.22850I \\ \end{array}$ $\begin{array}{c} b = 0.215537 + 0.593171I \\ u = -0.298674 - 1.170600I \\ a = -0.755088 - 0.161129I \\ -6.09100 - 10.22850I \\ \end{array}$ $\begin{array}{c} 0 = 0.215537 - 0.593171I \\ u = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I \\ b = 1.41833 - 0.53377I \\ u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I \\ b = 1.41833 + 0.53377I \\ u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I \\ u = 0.113127 + 0.821566I \\ u = 0.113127 - 0.821566I \\ u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ b = -0.142569 - 0.072822I \\ u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ \hline \\ u = -0.142569 + 0.072822I \\ \hline $	u = 0.347846 - 1.150340I		
$\begin{array}{c} u = -0.298674 + 1.170600I \\ a = -0.755088 + 0.161129I \\ b = 0.215537 + 0.593171I \\ u = -0.298674 - 1.170600I \\ a = -0.755088 - 0.161129I \\ b = 0.215537 - 0.593171I \\ u = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I \\ b = 1.41833 - 0.53377I \\ u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I \\ b = 1.41833 + 0.53377I \\ u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I \\ u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I \\ u = 0.113127 - 0.821566I \\ u = 0.113127 - 0.821566I \\ u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ b = -0.142569 - 0.072822I \\ u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ -0.60200 + 6.38751I \\ -16.3307 - 4.5656I \\ -16$	a = -0.326146 - 0.013567I	-0.98524 + 4.23518I	0
$\begin{array}{c} a = -0.755088 + 0.161129I & -6.09100 + 10.22850I \\ b = 0.215537 + 0.593171I \\ \hline u = -0.298674 - 1.170600I \\ a = -0.755088 - 0.161129I & -6.09100 - 10.22850I \\ \hline 0 = 0.215537 - 0.593171I \\ \hline u = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I & -0.161350 - 0.248342I \\ \hline 0 = 0.41833 - 0.53377I \\ \hline u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I & -0.161350 + 0.248342I \\ \hline 0 = 1.41833 + 0.53377I \\ \hline u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I & 2.70749 - 2.08523I \\ \hline 0 = 0.113127 + 0.821566I \\ \hline u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I & 2.70749 + 2.08523I \\ \hline 0 = 0.113127 - 0.821566I \\ \hline u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I & -9.60200 - 6.38751I & -16.3307 + 4.5656I \\ \hline b = -0.142569 - 0.072822I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ b = -0.142569 + 0.072822I \\ \hline \end{array}$	b = 0.146982 + 0.323227I		
$\begin{array}{c} b = & 0.215537 + 0.593171I \\ u = -0.298674 - 1.170600I \\ a = -0.755088 - 0.161129I \\ b = & 0.215537 - 0.593171I \\ \hline u = -0.077955 + 1.224770I \\ a = & 1.109290 - 0.431612I \\ b = & 1.41833 - 0.53377I \\ \hline u = -0.077955 - 1.224770I \\ a = & 1.109290 + 0.431612I \\ b = & 1.41833 + 0.53377I \\ \hline u = & -0.077955 - 1.224770I \\ a = & 1.109290 + 0.431612I \\ b = & 1.41833 + 0.53377I \\ \hline u = & 0.117974 + 1.232200I \\ a = & 0.425138 + 0.052215I \\ b = & 0.113127 + 0.821566I \\ \hline u = & 0.117974 - 1.232200I \\ a = & 0.425138 - 0.052215I \\ a = & 0.425138 - 0.052215I \\ b = & 0.113127 - 0.821566I \\ \hline u = & -0.754574 + 0.023137I \\ a = & -0.666482 - 0.494419I \\ b = & -0.142569 - 0.072822I \\ \hline u = & -0.754574 - 0.023137I \\ a = & -0.666482 + 0.494419I \\ b = & -0.142569 + 0.072822I \\ \hline \end{array}$	u = -0.298674 + 1.170600I		
$\begin{array}{c} u = -0.298674 - 1.170600I \\ a = -0.755088 - 0.161129I \\ b = 0.215537 - 0.593171I \\ \hline u = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I \\ b = 1.41833 - 0.53377I \\ \hline u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I \\ b = 1.41833 + 0.53377I \\ \hline u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I \\ u = 0.113127 + 0.821566I \\ \hline u = 0.113127 - 0.821566I \\ \hline u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ b = -0.142569 + 0.072822I \\ \hline u = -0.142569 + 0.072822I \\ b = -0.142569 + 0.072822I \\ b = -0.142569 + 0.072822I \\ \hline u = -0.142569 + 0.072822I \\ \hline \end{array}$	a = -0.755088 + 0.161129I	-6.09100 + 10.22850I	0
$\begin{array}{c} a = -0.755088 - 0.161129I & -6.09100 - 10.22850I & 0 \\ \underline{b} = 0.215537 - 0.593171I & \\ \underline{u} = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I & -0.161350 - 0.248342I & 0 \\ \underline{b} = 1.41833 - 0.53377I & \\ \underline{u} = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I & -0.161350 + 0.248342I & 0 \\ \underline{b} = 1.41833 + 0.53377I & \\ \underline{u} = 0.117974 + 1.232200I & \\ a = 0.425138 + 0.052215I & 2.70749 - 2.08523I & 0 \\ \underline{b} = 0.113127 + 0.821566I & \\ \underline{u} = 0.117974 - 1.232200I & \\ a = 0.425138 - 0.052215I & 2.70749 + 2.08523I & 0 \\ \underline{b} = 0.113127 - 0.821566I & \\ \underline{u} = -0.754574 + 0.023137I & \\ a = -0.666482 - 0.494419I & -9.60200 - 6.38751I & -16.3307 + 4.5656I \\ \underline{b} = -0.142569 - 0.072822I & \\ \underline{u} = -0.754574 - 0.023137I & \\ a = -0.666482 + 0.494419I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -9.60200 + 6.38751I \\ \underline{b} = -0.142569 + 0.072822I & -9.60200 + 6.38751I & -9.60200 + 6.38751I \\ \underline{b} = -0.142569 + 0.072822I$	b = 0.215537 + 0.593171I		
$\begin{array}{c} b = 0.215537 - 0.593171I \\ u = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I \\ b = 1.41833 - 0.53377I \\ u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I \\ b = 1.41833 + 0.53377I \\ u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I \\ u = 0.113127 + 0.821566I \\ u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I \\ a = 0.425138 - 0.052215I \\ u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I \\ a = 0.0666482 - 0.494419I \\ b = -0.142569 - 0.072822I \\ u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ \hline u = -0.754569 + 0.072822I \\ \hline u = -0.142569 + 0.072822I \\ \hline b = -0.142569 + 0.072822I \\ \hline \end{array}$	u = -0.298674 - 1.170600I		
$\begin{array}{c} u = -0.077955 + 1.224770I \\ a = 1.109290 - 0.431612I \\ b = 1.41833 - 0.53377I \\ \hline u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I \\ \hline u = 0.119290 + 0.431612I \\ \hline u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I \\ \hline u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I \\ \hline u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I \\ \hline u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I \\ \hline u = 0.113127 - 0.821566I \\ \hline u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ \hline u = -0.742569 + 0.072822I \\ \hline \end{array}$	a = -0.755088 - 0.161129I	-6.09100 - 10.22850I	0
$\begin{array}{c} a = & 1.109290 - 0.431612I \\ b = & 1.41833 - 0.53377I \\ \hline u = & -0.077955 - 1.224770I \\ a = & 1.109290 + 0.431612I \\ b = & 1.41833 + 0.53377I \\ \hline u = & 0.117974 + 1.232200I \\ a = & 0.425138 + 0.052215I \\ u = & 0.113127 + 0.821566I \\ \hline u = & 0.117974 - 1.232200I \\ a = & 0.425138 - 0.052215I \\ a = & 0.425138 - 0.052215I \\ \hline u = & 0.113127 - 0.821566I \\ \hline u = & 0.113127 - 0.821566I \\ \hline u = & -0.754574 + 0.023137I \\ a = & -0.666482 - 0.494419I \\ b = & -0.142569 - 0.072822I \\ \hline u = & -0.754574 - 0.023137I \\ a = & -0.666482 + 0.494419I \\ b = & -0.142569 + 0.072822I \\ \hline \end{array}$	b = 0.215537 - 0.593171I		
$\begin{array}{c} b = & 1.41833 - 0.53377I \\ u = & -0.077955 - 1.224770I \\ a = & 1.109290 + 0.431612I \\ b = & 1.41833 + 0.53377I \\ \hline u = & 0.117974 + 1.232200I \\ a = & 0.425138 + 0.052215I \\ b = & 0.113127 + 0.821566I \\ \hline u = & 0.117974 - 1.232200I \\ a = & 0.425138 - 0.052215I \\ b = & 0.113127 - 0.821566I \\ \hline u = & 0.13127 - 0.821566I \\ \hline u = & -0.754574 + 0.023137I \\ a = & -0.666482 - 0.494419I \\ b = & -0.142569 - 0.072822I \\ \hline u = & -0.754574 - 0.023137I \\ a = & -0.666482 + 0.494419I \\ b = & -0.142569 + 0.072822I \\ \hline u = & -0.142569 + 0.072822I \\ \hline u = & -0.142569 + 0.072822I \\ \hline \end{array}$	u = -0.077955 + 1.224770I		
$\begin{array}{c} u = -0.077955 - 1.224770I \\ a = 1.109290 + 0.431612I \\ b = 1.41833 + 0.53377I \\ \hline u = 0.117974 + 1.232200I \\ a = 0.425138 + 0.052215I \\ u = 0.113127 + 0.821566I \\ \hline u = 0.117974 - 1.232200I \\ a = 0.425138 - 0.052215I \\ a = 0.425138 - 0.052215I \\ a = 0.425138 - 0.052215I \\ \hline u = 0.113127 - 0.821566I \\ \hline u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ b = -0.142569 - 0.072822I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ \hline u = -0.142569 + 0.072822I \\ \hline \end{array}$	a = 1.109290 - 0.431612I	-0.161350 - 0.248342I	0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	b = 1.41833 - 0.53377I		
$\begin{array}{c} b = & 1.41833 + 0.53377I \\ \hline u = & 0.117974 + 1.232200I \\ a = & 0.425138 + 0.052215I \\ \hline u = & 0.113127 + 0.821566I \\ \hline u = & 0.117974 - 1.232200I \\ a = & 0.425138 - 0.052215I \\ \hline u = & 0.113127 - 0.821566I \\ \hline u = & -0.754574 + 0.023137I \\ a = & -0.666482 - 0.494419I \\ \hline b = & -0.142569 - 0.072822I \\ \hline u = & -0.754574 - 0.023137I \\ a = & -0.666482 + 0.494419I \\ \hline b = & -0.142569 + 0.072822I \\ \hline \end{array}$	u = -0.077955 - 1.224770I		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	a = 1.109290 + 0.431612I	-0.161350 + 0.248342I	0
$\begin{array}{llllllllllllllllllllllllllllllllllll$			
$\begin{array}{c} b = & 0.113127 + 0.821566I \\ \hline u = & 0.117974 - 1.232200I \\ a = & 0.425138 - 0.052215I \\ b = & 0.113127 - 0.821566I \\ \hline u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ b = -0.142569 - 0.072822I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ \hline \end{array}$	u = 0.117974 + 1.232200I		
$\begin{array}{c} u = & 0.117974 - 1.232200I \\ a = & 0.425138 - 0.052215I \\ b = & 0.113127 - 0.821566I \\ \hline u = -0.754574 + 0.023137I \\ a = & -0.666482 - 0.494419I \\ b = & -0.142569 - 0.072822I \\ \hline u = & -0.754574 - 0.023137I \\ a = & -0.666482 + 0.494419I \\ b = & -0.142569 + 0.072822I \\ \hline \end{array} \begin{array}{c} -0.666482 + 0.494419I \\ -0.60200 + 6.38751I \\ -0.63307 - 4.5656I \\ -0.142569 - 0.072822I \\ \hline \end{array}$	a = 0.425138 + 0.052215I	2.70749 - 2.08523I	0
$\begin{array}{lll} a = & 0.425138 - 0.052215I & 2.70749 + 2.08523I & 0 \\ b = & 0.113127 - 0.821566I & & & & \\ \hline u = -0.754574 + 0.023137I & & & & \\ a = & -0.666482 - 0.494419I & -9.60200 - 6.38751I & -16.3307 + 4.5656I \\ b = & -0.142569 - 0.072822I & & & \\ \hline u = & -0.754574 - 0.023137I & & & \\ a = & -0.666482 + 0.494419I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ b = & -0.142569 + 0.072822I & & & & \\ \end{array}$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	u = 0.117974 - 1.232200I		
$\begin{array}{c} u = -0.754574 + 0.023137I \\ a = -0.666482 - 0.494419I \\ b = -0.142569 - 0.072822I \\ \hline u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I \\ b = -0.142569 + 0.072822I \\ \end{array} \begin{array}{c} -9.60200 - 6.38751I \\ -9.60200 + 6.38751I \\ -9.60200 + 6.38751I \\ -16.3307 - 4.5656I \\ -16.3307 - $	a = 0.425138 - 0.052215I	2.70749 + 2.08523I	0
$\begin{array}{lll} a = -0.666482 - 0.494419I & -9.60200 - 6.38751I & -16.3307 + 4.5656I \\ \underline{b = -0.142569 - 0.072822I} & \\ u = -0.754574 - 0.023137I \\ a = -0.666482 + 0.494419I & -9.60200 + 6.38751I & -16.3307 - 4.5656I \\ \underline{b = -0.142569 + 0.072822I} & \\ \end{array}$	b = 0.113127 - 0.821566I		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	u = -0.754574 + 0.023137I		
$ \begin{aligned} u &= -0.754574 - 0.023137I \\ a &= -0.666482 + 0.494419I \\ b &= -0.142569 + 0.072822I \end{aligned} -9.60200 + 6.38751I -16.3307 - 4.5656I $	a = -0.666482 - 0.494419I	-9.60200 - 6.38751I	-16.3307 + 4.5656I
a = -0.666482 + 0.494419I -9.60200 + 6.38751I -16.3307 - 4.5656I b = -0.142569 + 0.072822I			
b = -0.142569 + 0.072822I			
	a = -0.666482 + 0.494419I	-9.60200 + 6.38751I	-16.3307 - 4.5656I
$0.672064 \pm 0.292097I$			
u = 0.075004 + 0.5250277	u = 0.673064 + 0.323027I		
a = 1.06398 - 2.79653I $-1.10873 - 7.75152I$ $-10.26708 + 9.05915I$	a = 1.06398 - 2.79653I	-1.10873 - 7.75152I	-10.26708 + 9.05915I
b = -1.86660 + 1.44175I	b = -1.86660 + 1.44175I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.673064 - 0.323027I		
a = 1.06398 + 2.79653I	-1.10873 + 7.75152I	-10.26708 - 9.05915I
b = -1.86660 - 1.44175I		
u = -0.659559 + 0.345898I		
a = 1.45084 + 1.72925I	2.32911 + 3.95267I	-4.15635 - 4.95765I
b = -1.62214 - 0.68769I		
u = -0.659559 - 0.345898I		
a = 1.45084 - 1.72925I	2.32911 - 3.95267I	-4.15635 + 4.95765I
b = -1.62214 + 0.68769I		
u = -0.313385 + 1.218800I		
a = -0.294266 - 0.525040I	-5.77595 - 2.51906I	0
b = -0.311221 + 0.371550I		
u = -0.313385 - 1.218800I		
a = -0.294266 + 0.525040I	-5.77595 + 2.51906I	0
b = -0.311221 - 0.371550I		
u = -0.648528 + 0.262294I		
a = -2.67364 - 0.24168I	-5.97830 + 4.86271I	-16.4498 - 7.8661I
b = 1.08723 - 1.12029I		
u = -0.648528 - 0.262294I		
a = -2.67364 + 0.24168I	-5.97830 - 4.86271I	-16.4498 + 7.8661I
b = 1.08723 + 1.12029I		
u = -0.486563 + 0.498299I		
a = 1.29221 + 1.35928I	3.01687 - 0.15440I	-1.87765 - 2.16900I
b = -1.247510 + 0.057218I		
u = -0.486563 - 0.498299I		
a = 1.29221 - 1.35928I	3.01687 + 0.15440I	-1.87765 + 2.16900I
b = -1.247510 - 0.057218I		
u = 0.616477 + 0.282636I		
a = -0.118972 + 1.136580I	-1.70677 - 3.19543I	-9.12410 + 5.81601I
b = -0.122109 - 0.118162I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.616477 - 0.282636I		
a = -0.118972 - 1.136580I	-1.70677 + 3.19543I	-9.12410 - 5.81601I
b = -0.122109 + 0.118162I		
u = 0.427014 + 0.522919I		
a = 1.85596 - 1.10388I	-0.18528 + 4.01394I	-7.39455 - 2.93534I
b = -1.45023 - 0.82297I		
u = 0.427014 - 0.522919I		
a = 1.85596 + 1.10388I	-0.18528 - 4.01394I	-7.39455 + 2.93534I
b = -1.45023 + 0.82297I		
u = 0.592622 + 0.314755I		
a = 0.90205 - 1.41462I	-1.42383 - 1.50400I	-9.92069 + 3.68533I
b = -0.756552 + 0.851099I		
u = 0.592622 - 0.314755I		
a = 0.90205 + 1.41462I	-1.42383 + 1.50400I	-9.92069 - 3.68533I
b = -0.756552 - 0.851099I		
u = 0.614747 + 0.193180I		
a = -1.70242 + 3.33964I	-6.79903 - 0.64790I	-18.7159 + 2.4926I
b = 1.98420 - 0.99309I		
u = 0.614747 - 0.193180I		
a = -1.70242 - 3.33964I	-6.79903 + 0.64790I	-18.7159 - 2.4926I
b = 1.98420 + 0.99309I		
u = -0.530135 + 0.320976I		
a = -2.6863 + 14.1321I	-2.93001 + 1.56016I	-62.2549 + 71.6820I
b = 0.55207 - 7.84865I		
u = -0.530135 - 0.320976I		
a = -2.6863 - 14.1321I	-2.93001 - 1.56016I	-62.2549 - 71.6820I
b = 0.55207 + 7.84865I		
u = -0.176083 + 1.375290I		
a = 1.319650 + 0.103630I	0.542290 - 0.074660I	0
b = 1.15018 + 1.07723I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -0.176083 - 1.375290I		
a = 1.319650 - 0.103630I	0.542290 + 0.074660I	0
b = 1.15018 - 1.07723I		
u = -0.562494 + 0.240160I		
a = -2.44776 - 2.70868I	-2.43280 + 1.21285I	-5.48234 - 6.16626I
b = 1.86945 + 1.05664I		
u = -0.562494 - 0.240160I		
a = -2.44776 + 2.70868I	-2.43280 - 1.21285I	-5.48234 + 6.16626I
b = 1.86945 - 1.05664I		
u = 0.232456 + 1.379630I		
a = 1.02637 + 2.35893I	-1.78282 - 3.72107I	0
b = 2.47762 - 0.87478I		
u = 0.232456 - 1.379630I		
a = 1.02637 - 2.35893I	-1.78282 + 3.72107I	0
b = 2.47762 + 0.87478I		
u = 0.107712 + 1.409150I		
a = 0.737553 + 0.143732I	5.02738 - 2.93469I	0
b = 0.003914 - 0.529307I		
u = 0.107712 - 1.409150I		
a = 0.737553 - 0.143732I	5.02738 + 2.93469I	0
b = 0.003914 + 0.529307I		
u = 0.19083 + 1.40218I		
a = 0.135240 - 0.073939I	4.46155 - 2.13327I	0
b = 0.934843 + 0.334737I		
u = 0.19083 - 1.40218I		
a = 0.135240 + 0.073939I	4.46155 + 2.13327I	0
b = 0.934843 - 0.334737I		
u = -0.22241 + 1.40043I		
a = 0.43037 - 2.12672I	2.84029 + 4.11499I	0
b = 2.89349 + 1.45814I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -0.22241 - 1.40043I		
a = 0.43037 + 2.12672I	2.84029 - 4.11499I	0
b = 2.89349 - 1.45814I		
u = -0.25197 + 1.40362I		
a = -1.23101 - 1.46628I	-0.65725 + 8.14961I	0
b = 0.99999 - 1.02640I		
u = -0.25197 - 1.40362I		
a = -1.23101 + 1.46628I	-0.65725 - 8.14961I	0
b = 0.99999 + 1.02640I		
u = -0.570859 + 0.050835I		
a = 0.840207 - 1.053810I	-3.95624 - 2.45671I	-16.1151 + 3.1714I
b = 0.446144 + 0.934977I		
u = -0.570859 - 0.050835I		
a = 0.840207 + 1.053810I	-3.95624 + 2.45671I	-16.1151 - 3.1714I
b = 0.446144 - 0.934977I		
u = -0.21435 + 1.41488I		
a = -5.17093 - 3.12191I	2.60671 + 4.35178I	0
b = 9.88874 - 5.91330I		
u = -0.21435 - 1.41488I		
a = -5.17093 + 3.12191I	2.60671 - 4.35178I	0
b = 9.88874 + 5.91330I		
u = 0.24025 + 1.41099I		
a = 0.208636 + 0.619895I	3.71345 - 6.34087I	0
b = -0.315370 - 0.588894I		
u = 0.24025 - 1.41099I		
a = 0.208636 - 0.619895I	3.71345 + 6.34087I	0
b = -0.315370 + 0.588894I		
u = 0.22894 + 1.42766I		
a = -0.214134 - 1.001530I	4.18239 - 4.52972I	0
b = -1.56014 + 1.05291I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.22894 - 1.42766I		
a = -0.214134 + 1.001530I	4.18239 + 4.52972I	0
b = -1.56014 - 1.05291I		
u = 0.15743 + 1.44043I		
a = 0.03145 - 1.55183I	5.97894 + 1.89406I	0
b = -1.93175 - 0.15846I		
u = 0.15743 - 1.44043I		
a = 0.03145 + 1.55183I	5.97894 - 1.89406I	0
b = -1.93175 + 0.15846I		
u = 0.25998 + 1.42918I		
a = -1.05288 - 1.74902I	4.50338 - 11.15960I	0
b = -2.32630 + 1.56569I		
u = 0.25998 - 1.42918I		
a = -1.05288 + 1.74902I	4.50338 + 11.15960I	0
b = -2.32630 - 1.56569I		
u = -0.25308 + 1.43624I		
a = -0.34926 + 1.45938I	8.04215 + 7.29186I	0
b = -2.13375 - 0.83125I		
u = -0.25308 - 1.43624I		
a = -0.34926 - 1.45938I	8.04215 - 7.29186I	0
b = -2.13375 + 0.83125I		
u = -0.17132 + 1.45219I		
a = -0.264172 + 1.235620I	9.23042 + 2.23354I	0
b = -1.60046 - 0.59631I		
u = -0.17132 - 1.45219I		
a = -0.264172 - 1.235620I	9.23042 - 2.23354I	0
b = -1.60046 + 0.59631I		
u = -0.28819 + 1.43675I		
a = 0.35070 - 1.37830I	4.83747 + 12.28390I	0
b = 1.79966 + 0.83955I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -0.28819 - 1.43675I $a = 0.35070 + 1.37830I$	4.83747 - 12.28390I	0
b = 1.79966 - 0.83955I		
u = 0.28430 + 1.44095I $a = 0.69012 + 1.90557I$	-0.0021 - 17.8042I	0
b = 2.38988 - 1.56515I	0.0021 1.00121	
u = 0.28430 - 1.44095I $a = 0.69012 - 1.90557I$	-0.0021 + 17.8042I	0
b = 2.38988 + 1.56515I		
u = -0.10870 + 1.47116I $a = 0.280946 - 0.767506I$ $b = 1.190360 + 0.365704I$	7.38329 - 2.52548I	0
u = -0.10870 - 1.47116I		
a = 0.280946 + 0.767506I	7.38329 + 2.52548I	0
b = 1.190360 - 0.365704I $u = 0.31311 + 1.44342I$		
a = 0.398723 + 0.455278I	1.42609 - 5.78759I	0
b = 0.431464 - 0.556617I $u = 0.31311 - 1.44342I$		
a = 0.398723 - 0.455278I	1.42609 + 5.78759I	0
b = 0.431464 + 0.556617I $u = 0.12451 + 1.47990I$		
a = -0.087593 + 1.216800I	2.30951 + 7.86961I	0
b = 2.04305 - 0.01678I $u = 0.12451 - 1.47990I$		
a = -0.087593 - 1.216800I	2.30951 - 7.86961I	0
b = 2.04305 + 0.01678I $u = 0.291854 + 0.422173I$		
a = 0.231834 + 0.422173I $a = 1.45419 + 0.20833I$ $b = -0.109873 - 0.312516I$	-0.66057 - 1.49579I	-5.59034 + 3.83194I
0 = -0.103073 - 0.3123107		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.291854 - 0.422173I		
a = 1.45419 - 0.20833I	-0.66057 + 1.49579I	-5.59034 - 3.83194I
b = -0.109873 + 0.312516I		
u = -0.188505 + 0.460456I		
a = 0.364513 - 0.286938I	-4.65808 - 1.73002I	-12.40385 + 1.70424I
b = 1.27520 + 1.02424I		
u = -0.188505 - 0.460456I		
a = 0.364513 + 0.286938I	-4.65808 + 1.73002I	-12.40385 - 1.70424I
b = 1.27520 - 1.02424I		
u = 0.18126 + 1.50593I		
a = -0.424240 - 0.456464I	3.71893 - 5.80434I	0
b = -0.547878 + 0.934518I		
u = 0.18126 - 1.50593I		
a = -0.424240 + 0.456464I	3.71893 + 5.80434I	0
b = -0.547878 - 0.934518I		
u = 0.355795 + 0.303110I		
a = 0.063077 - 0.722119I	-0.916385 + 0.195495I	-7.80562 + 1.64458I
b = 0.568919 - 0.030956I		
u = 0.355795 - 0.303110I		
a = 0.063077 + 0.722119I	-0.916385 - 0.195495I	-7.80562 - 1.64458I
b = 0.568919 + 0.030956I		
u = 0.425920		
a = 0.405168	-0.879709	-10.6710
b = 0.396583		

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{98} - 19u^{97} + \dots - 841339u + 59603$
c_2, c_6, c_7	$u^{98} + 3u^{97} + \dots + 5u + 1$
<i>C</i> 3	$u^{98} - 3u^{97} + \dots + 595u + 425$
C ₄	$u^{98} - u^{97} + \dots - u - 1$
c_5, c_{12}	$u^{98} - 3u^{97} + \dots + u + 1$
c_{8}, c_{11}	$u^{98} - u^{97} + \dots - 33u - 1$
<i>c</i> 9	$u^{98} + 5u^{97} + \dots - 3041767u - 195991$
c_{10}	$u^{98} + 9u^{97} + \dots + 4943u - 137$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{98} + 45y^{97} + \dots + 84576889997y + 3552517609$
c_2, c_6, c_7	$y^{98} + 89y^{97} + \dots - 7y + 1$
c_3	$y^{98} + 13y^{97} + \dots + 6423025y + 180625$
c_4	$y^{98} - 3y^{97} + \dots - 99y + 1$
c_5, c_{12}	$y^{98} + 73y^{97} + \dots - 7y + 1$
c_{8}, c_{11}	$y^{98} - 67y^{97} + \dots - 179y + 1$
<i>c</i> 9	$y^{98} - 203y^{97} + \dots - 3248967720299y + 38412472081$
c_{10}	$y^{98} + 137y^{97} + \dots - 6924923y + 18769$