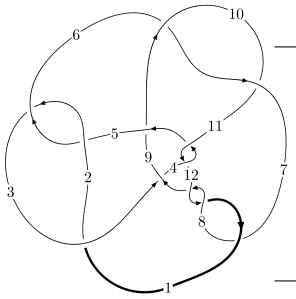
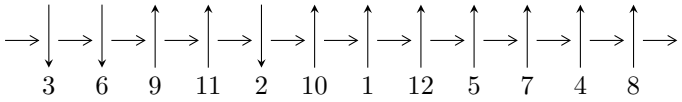
$12a_{0395}$ $(K12a_{0395})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 2.65404 \times 10^{344} u^{118} - 3.71960 \times 10^{344} u^{117} + \cdots + 1.51948 \times 10^{345} b - 8.39541 \times 10^{345},$$
$$- 4.85729 \times 10^{345} u^{118} - 1.06056 \times 10^{346} u^{117} + \cdots + 1.51948 \times 10^{345} a + 4.54469 \times 10^{346},$$
$$u^{119} + 2u^{118} + \cdots - 26u + 1 \rangle$$
$$I_2^u = \langle -u^{27} + 18u^{26} + \cdots + b + 13,\ -5u^{26} + 5u^{25} + \cdots + a - 5,\ u^{28} - u^{27} + \cdots + 6u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 147 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. $\boldsymbol{I_1^u = \langle 2.65 \times 10^{344} u^{118} - 3.72 \times 10^{344} u^{117} + \cdots + 1.52 \times 10^{345} b - 8.40 \times 10^{345},\ -4.86 \times 10^{345} u^{118} - 1.06 \times 10^{346} u^{117} + \cdots + 1.52 \times 10^{345} a + 4.54 \times 10^{346},\ u^{119} + 2u^{118} + \cdots - 26u + 1 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 3.19669u^{118} + 6.97979u^{117} + \cdots + 513.032u - 29.9096 \\ -0.174668u^{118} + 0.244795u^{117} + \cdots - 62.1195u + 5.52519 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 3.45928u^{118} + 7.64632u^{117} + \cdots + 563.101u - 34.8483 \\ -0.208279u^{118} + 0.424943u^{117} + \cdots - 65.5319u + 5.66654 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.55048u^{118} - 3.05586u^{117} + \cdots - 520.403u + 40.2446 \\ 0.373680u^{118} + 0.462149u^{117} + \cdots - 61.8390u + 3.46753 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3.38646u^{118} - 6.55223u^{117} + \cdots - 668.355u + 47.2932 \\ -0.293160u^{118} + 0.510861u^{117} + \cdots - 51.3704u + 2.09553 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.68383u^{118} + 3.07028u^{117} + \cdots + 512.719u - 38.2522 \\ -0.497398u^{118} - 1.60028u^{117} + \cdots + 16.7133u - 0.0504918 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3.52942u^{118} - 7.11188u^{117} + \cdots - 628.685u + 45.7434 \\ -1.04054u^{118} - 1.58837u^{117} + \cdots - 43.3753u + 1.76478 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.84545u^{118} + 3.19677u^{117} + \cdots + 336.654u - 40.3459 \\ 0.339358u^{118} - 0.259898u^{117} + \cdots + 120.671u - 6.71138 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.64123u^{118} - 5.23612u^{117} + \cdots - 267.516u + 30.7025$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{119} + 51u^{118} + \cdots + 26772u + 361$
c_2, c_5	$u^{119} + 7u^{118} + \cdots - 208u - 19$
c_3	$u^{119} - u^{118} + \cdots - 25185412u - 11522837$
c_4, c_{11}	$u^{119} - 3u^{118} + \cdots - 2732u - 8803$
c_6, c_{10}	$u^{119} + 3u^{118} + \cdots - 4107u - 2939$
c_7, c_8, c_{12}	$u^{119} - 2u^{118} + \cdots - 26u - 1$
c_9	$u^{119} + u^{118} + \cdots + 8910u - 1089$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{119} + 49y^{118} + \cdots + 68785416y - 130321$
c_2, c_5	$y^{119} - 51y^{118} + \cdots + 26772y - 361$
c_3	$y^{119} + 43y^{118} + \cdots - 5505345069862148y - 132775772528569$
c_4, c_{11}	$y^{119} + 95y^{118} + \cdots - 90407930y - 77492809$
c_6, c_{10}	$y^{119} - 75y^{118} + \cdots + 495977351y - 8637721$
c_7, c_8, c_{12}	$y^{119} + 120y^{118} + \cdots + 210y - 1$
c_9	$y^{119} - 13y^{118} + \cdots - 26164314y - 1185921$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.355122 + 0.928118I$ $a = 0.550756 - 0.398938I$ $b = 1.14338 - 0.84841I$	$3.73858 + 1.09865I$	0
$u = 0.355122 - 0.928118I$ $a = 0.550756 + 0.398938I$ $b = 1.14338 + 0.84841I$	$3.73858 - 1.09865I$	0
$u = 0.437780 + 0.889964I$ $a = -0.413334 + 0.259923I$ $b = -1.15550 + 0.89782I$	$2.52193 - 4.36091I$	0
$u = 0.437780 - 0.889964I$ $a = -0.413334 - 0.259923I$ $b = -1.15550 - 0.89782I$	$2.52193 + 4.36091I$	0
$u = -0.845759 + 0.501522I$ $a = 1.092950 - 0.875220I$ $b = 0.953716 + 0.274130I$	$1.93927 - 7.77593I$	0
$u = -0.845759 - 0.501522I$ $a = 1.092950 + 0.875220I$ $b = 0.953716 - 0.274130I$	$1.93927 + 7.77593I$	0
$u = 0.875445 + 0.381861I$ $a = 0.405474 + 1.234410I$ $b = 0.313119 - 0.353758I$	$-2.76497 - 2.55600I$	0
$u = 0.875445 - 0.381861I$ $a = 0.405474 - 1.234410I$ $b = 0.313119 + 0.353758I$	$-2.76497 + 2.55600I$	0
$u = -0.705215 + 0.782711I$ $a = -1.117440 + 0.448086I$ $b = -1.055030 - 0.080011I$	$-4.11674 - 5.83144I$	0
$u = -0.705215 - 0.782711I$ $a = -1.117440 - 0.448086I$ $b = -1.055030 + 0.080011I$	$-4.11674 + 5.83144I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.757241+0.738794I$ $a=\ 0.530380-0.966180I$ $b=\ 0.964868-0.113031I$	$1.31392+2.27943I$	0
$u=-0.757241-0.738794I$ $a=\ 0.530380+0.966180I$ $b=\ 0.964868+0.113031I$	$1.31392-2.27943I$	0
$u=-0.951437+0.538602I$ $a=-0.954025+0.834561I$ $b=-1.006380-0.310638I$	$0.09823-13.43470I$	0
$u=-0.951437-0.538602I$ $a=-0.954025-0.834561I$ $b=-1.006380+0.310638I$	$0.09823+13.43470I$	0
$u=\ 0.695269+0.547167I$ $a=\ 1.12801+0.86039I$ $b=\ 1.313030+0.247781I$	$-3.35283+7.39480I$	0
$u=\ 0.695269-0.547167I$ $a=\ 1.12801-0.86039I$ $b=\ 1.313030-0.247781I$	$-3.35283-7.39480I$	0
$u=\ 1.112250+0.084793I$ $a=\ 0.065711+1.222590I$ $b=\ 0.053847-0.423809I$	$-3.19379+1.91472I$	0
$u=\ 1.112250-0.084793I$ $a=\ 0.065711-1.222590I$ $b=\ 0.053847+0.423809I$	$-3.19379-1.91472I$	0
$u=-1.081990+0.417768I$ $a=-0.237717+0.919197I$ $b=-0.527929-0.155026I$	$-2.65576-0.04297I$	0
$u=-1.081990-0.417768I$ $a=-0.237717-0.919197I$ $b=-0.527929+0.155026I$	$-2.65576+0.04297I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.641878 + 0.455011I$ $a = -1.12839 - 1.00439I$ $b = -1.134130 - 0.121220I$	$-1.97592 + 2.57078I$	0
$u = 0.641878 - 0.455011I$ $a = -1.12839 + 1.00439I$ $b = -1.134130 + 0.121220I$	$-1.97592 - 2.57078I$	0
$u = 0.675053 + 0.328204I$ $a = 1.136430 - 0.608303I$ $b = 0.237290 + 0.356326I$	$4.09882 + 8.36988I$	0
$u = 0.675053 - 0.328204I$ $a = 1.136430 + 0.608303I$ $b = 0.237290 - 0.356326I$	$4.09882 - 8.36988I$	0
$u = 0.634326 + 0.392829I$ $a = -0.81207 - 1.22851I$ $b = -0.611921 + 0.198271I$	$-1.91605 + 1.49481I$	0
$u = 0.634326 - 0.392829I$ $a = -0.81207 + 1.22851I$ $b = -0.611921 - 0.198271I$	$-1.91605 - 1.49481I$	0
$u = -0.240172 + 1.238760I$ $a = -0.556332 + 0.086031I$ $b = -0.113358 + 1.141540I$	$-0.726114 - 0.980196I$	0
$u = -0.240172 - 1.238760I$ $a = -0.556332 - 0.086031I$ $b = -0.113358 - 1.141540I$	$-0.726114 + 0.980196I$	0
$u = -0.484304 + 0.554618I$ $a = -0.606336 - 0.560699I$ $b = -0.616895 + 0.079272I$	$0.41624 - 4.00939I$	0
$u = -0.484304 - 0.554618I$ $a = -0.606336 + 0.560699I$ $b = -0.616895 - 0.079272I$	$0.41624 + 4.00939I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.264408+1.242480I$ $a=\ \ 0.477396-0.193983I$ $b=-0.348744-0.889733I$	$-1.11104-6.19546I$	0
$u=-0.264408-1.242480I$ $a=\ \ 0.477396+0.193983I$ $b=-0.348744+0.889733I$	$-1.11104+6.19546I$	0
$u=-0.964873+0.827467I$ $a=-0.468445+0.848498I$ $b=-0.992484-0.116628I$	$-0.55827+7.05368I$	0
$u=-0.964873-0.827467I$ $a=-0.468445-0.848498I$ $b=-0.992484+0.116628I$	$-0.55827-7.05368I$	0
$u=\ \ 0.095017+1.278750I$ $a=-0.650456-0.592085I$ $b=-0.693055+0.490549I$	$-1.97975-4.57227I$	0
$u=\ \ 0.095017-1.278750I$ $a=-0.650456+0.592085I$ $b=-0.693055-0.490549I$	$-1.97975+4.57227I$	0
$u=-0.225905+1.265030I$ $a=-0.537859-0.450634I$ $b=-0.724965+0.412460I$	$-1.26041-0.68479I$	0
$u=-0.225905-1.265030I$ $a=-0.537859+0.450634I$ $b=-0.724965-0.412460I$	$-1.26041+0.68479I$	0
$u=-0.699562+0.012160I$ $a=\ \ 0.572503-0.802595I$ $b=\ \ 0.331384-0.700904I$	$2.66598+2.68142I$	0
$u=-0.699562-0.012160I$ $a=\ \ 0.572503+0.802595I$ $b=\ \ 0.331384+0.700904I$	$2.66598-2.68142I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.453308 + 0.523255I$ $a = -1.017620 - 0.478761I$ $b = -0.985184 + 0.688651I$	$-1.41515 + 1.44928I$	0
$u = 0.453308 - 0.523255I$ $a = -1.017620 + 0.478761I$ $b = -0.985184 - 0.688651I$	$-1.41515 - 1.44928I$	0
$u = 0.428626 + 0.530864I$ $a = 1.64427 + 0.93701I$ $b = 0.865572 + 0.646236I$	$-6.41806 + 1.42312I$	0
$u = 0.428626 - 0.530864I$ $a = 1.64427 - 0.93701I$ $b = 0.865572 - 0.646236I$	$-6.41806 - 1.42312I$	0
$u = -0.305414 + 0.597967I$ $a = 0.95867 - 1.19353I$ $b = 1.014210 - 0.576340I$	$1.23996 + 1.80948I$	$6.00000 + 0.I$
$u = -0.305414 - 0.597967I$ $a = 0.95867 + 1.19353I$ $b = 1.014210 + 0.576340I$	$1.23996 - 1.80948I$	$6.00000 + 0.I$
$u = 0.623047 + 0.229109I$ $a = -1.41218 + 0.62072I$ $b = -0.188966 - 0.236767I$	$5.77681 + 2.48293I$	$12.94457 - 3.64631I$
$u = 0.623047 - 0.229109I$ $a = -1.41218 - 0.62072I$ $b = -0.188966 + 0.236767I$	$5.77681 - 2.48293I$	$12.94457 + 3.64631I$
$u = -0.565817 + 0.318993I$ $a = 0.626424 + 0.495344I$ $b = 0.530615 + 0.076115I$	$1.123500 + 0.392328I$	$10.23388 + 0.I$
$u = -0.565817 - 0.318993I$ $a = 0.626424 - 0.495344I$ $b = 0.530615 - 0.076115I$	$1.123500 - 0.392328I$	$10.23388 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.230407+1.346620I$ $a=\ 0.081429-0.280356I$ $b=-0.329335-0.132775I$	$-3.97108-2.43584I$	0
$u=-0.230407-1.346620I$ $a=\ 0.081429+0.280356I$ $b=-0.329335+0.132775I$	$-3.97108+2.43584I$	0
$u=-0.071954+1.381730I$ $a=-0.149743-0.485375I$ $b=-0.590332-0.059182I$	$-3.85572-1.71095I$	0
$u=-0.071954-1.381730I$ $a=-0.149743+0.485375I$ $b=-0.590332+0.059182I$	$-3.85572+1.71095I$	0
$u=-0.185869+1.371190I$ $a=\ 0.560257+0.491962I$ $b=\ 0.755665-0.451477I$	$-1.51610-4.94231I$	0
$u=-0.185869-1.371190I$ $a=\ 0.560257-0.491962I$ $b=\ 0.755665+0.451477I$	$-1.51610+4.94231I$	0
$u=\ 0.022030+1.384840I$ $a=\ 1.283010-0.173050I$ $b=\ 3.44123+0.33674I$	$-5.42143+3.44426I$	0
$u=\ 0.022030-1.384840I$ $a=\ 1.283010+0.173050I$ $b=\ 3.44123-0.33674I$	$-5.42143-3.44426I$	0
$u=-0.611413+0.036672I$ $a=-0.625202+1.115140I$ $b=-0.071919+0.898469I$	$2.99131-2.19855I$	$11.46185+4.70957I$
$u=-0.611413-0.036672I$ $a=-0.625202-1.115140I$ $b=-0.071919-0.898469I$	$2.99131+2.19855I$	$11.46185-4.70957I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.009442+1.389940I$		
$a=$	$0.597050+0.553267I$	$-1.90973-0.74900I$	0
$b=$	$0.726809-0.497772I$		
$u=$	$0.009442-1.389940I$		
$a=$	$0.597050-0.553267I$	$-1.90973+0.74900I$	0
$b=$	$0.726809+0.497772I$		
$u=$	$0.068252+1.395030I$		
$a=$	$0.799590-0.024691I$	$-2.63776+7.11139I$	0
$b=$	$4.16098-0.65705I$		
$u=$	$0.068252-1.395030I$		
$a=$	$0.799590+0.024691I$	$-2.63776-7.11139I$	0
$b=$	$4.16098+0.65705I$		
$u=$	$0.019788+1.405330I$		
$a=$	$-0.787884+0.025430I$	$-2.12066+1.34209I$	0
$b=$	$-3.83254+1.05902I$		
$u=$	$0.019788-1.405330I$		
$a=$	$-0.787884-0.025430I$	$-2.12066-1.34209I$	0
$b=$	$-3.83254-1.05902I$		
$u=$	$0.178838+1.397610I$		
$a=$	$0.280190-0.972222I$	$0.59675+5.29093I$	0
$b=$	$0.514942-1.214260I$		
$u=$	$0.178838-1.397610I$		
$a=$	$0.280190+0.972222I$	$0.59675-5.29093I$	0
$b=$	$0.514942+1.214260I$		
$u=$	$-0.02863+1.43149I$		
$a=$	$-1.263290+0.492520I$	$-6.34108-3.66733I$	0
$b=$	$-3.09033+0.24494I$		
$u=$	$-0.02863-1.43149I$		
$a=$	$-1.263290-0.492520I$	$-6.34108+3.66733I$	0
$b=$	$-3.09033-0.24494I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.22631 + 1.45071I$ $a = -0.223160 + 0.875930I$ $b = -0.421321 + 0.944082I$	$-1.66872 + 11.59560I$	0
$u = 0.22631 - 1.45071I$ $a = -0.223160 - 0.875930I$ $b = -0.421321 - 0.944082I$	$-1.66872 - 11.59560I$	0
$u = 0.41059 + 1.41053I$ $a = 0.976432 + 0.144840I$ $b = 2.63906 + 0.49267I$	$-7.57844 + 3.50049I$	0
$u = 0.41059 - 1.41053I$ $a = 0.976432 - 0.144840I$ $b = 2.63906 - 0.49267I$	$-7.57844 - 3.50049I$	0
$u = -0.334922 + 0.409655I$ $a = 2.57491 - 0.45039I$ $b = 0.640329 + 0.086594I$	$1.54320 - 3.79998I$	$8.38218 + 10.90850I$
$u = -0.334922 - 0.409655I$ $a = 2.57491 + 0.45039I$ $b = 0.640329 - 0.086594I$	$1.54320 + 3.79998I$	$8.38218 - 10.90850I$
$u = 0.234996 + 0.472015I$ $a = -0.34460 - 1.75071I$ $b = -0.324245 + 0.319005I$	$-1.57985 + 1.04137I$	$-2.49531 - 4.65112I$
$u = 0.234996 - 0.472015I$ $a = -0.34460 + 1.75071I$ $b = -0.324245 - 0.319005I$	$-1.57985 - 1.04137I$	$-2.49531 + 4.65112I$
$u = 0.05301 + 1.48085I$ $a = 0.200024 + 0.748713I$ $b = 0.770060 + 0.614245I$	$-7.97482 + 1.97792I$	0
$u = 0.05301 - 1.48085I$ $a = 0.200024 - 0.748713I$ $b = 0.770060 - 0.614245I$	$-7.97482 - 1.97792I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.24021+1.46852I$		
$a=$	$0.906336+0.004574I$	$-7.97429+4.79171I$	0
$b=$	$3.10374+0.45869I$		
$u=$	$0.24021-1.46852I$		
$a=$	$0.906336-0.004574I$	$-7.97429-4.79171I$	0
$b=$	$3.10374-0.45869I$		
$u=$	$-0.09971+1.48504I$		
$a=$	$-1.160300-0.419905I$	$-4.72540-5.35859I$	0
$b=$	$-3.26243-0.52300I$		
$u=$	$-0.09971-1.48504I$		
$a=$	$-1.160300+0.419905I$	$-4.72540+5.35859I$	0
$b=$	$-3.26243+0.52300I$		
$u=$	$0.271717+0.433378I$		
$a=$	$-0.466330-1.189350I$	$-1.63518+1.00896I$	$-1.29963-2.42841I$
$b=$	$-0.348299+0.415435I$		
$u=$	$0.271717-0.433378I$		
$a=$	$-0.466330+1.189350I$	$-1.63518-1.00896I$	$-1.29963+2.42841I$
$b=$	$-0.348299-0.415435I$		
$u=$	$-0.12626+1.49477I$		
$a=$	$0.013608+0.543832I$	$-6.28755-6.10241I$	0
$b=$	$0.445315+0.158551I$		
$u=$	$-0.12626-1.49477I$		
$a=$	$0.013608-0.543832I$	$-6.28755+6.10241I$	0
$b=$	$0.445315-0.158551I$		
$u=$	$0.22981+1.48820I$		
$a=$	$0.902472-0.130756I$	$-8.28790+5.77299I$	0
$b=$	$2.98391+0.80464I$		
$u=$	$0.22981-1.48820I$		
$a=$	$0.902472+0.130756I$	$-8.28790-5.77299I$	0
$b=$	$2.98391-0.80464I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.04426 + 1.50840I$ $a = 0.643066 + 0.821993I$ $b = 1.88275 + 0.98824I$	$-8.16537 + 1.90483I$	0
$u = 0.04426 - 1.50840I$ $a = 0.643066 - 0.821993I$ $b = 1.88275 - 0.98824I$	$-8.16537 - 1.90483I$	0
$u = 0.14469 + 1.52320I$ $a = -0.967546 + 0.219590I$ $b = -2.84342 - 0.59009I$	$-13.27470 + 3.56498I$	0
$u = 0.14469 - 1.52320I$ $a = -0.967546 - 0.219590I$ $b = -2.84342 + 0.59009I$	$-13.27470 - 3.56498I$	0
$u = 0.25073 + 1.52669I$ $a = -0.873917 + 0.166504I$ $b = -2.84533 - 0.88143I$	$-10.1029 + 10.9021I$	0
$u = 0.25073 - 1.52669I$ $a = -0.873917 - 0.166504I$ $b = -2.84533 + 0.88143I$	$-10.1029 - 10.9021I$	0
$u = -0.441308$ $a = 0.675392$ $b = 0.301982$	0.688149	14.7620
$u = -0.29831 + 1.53296I$ $a = -0.998556 - 0.171879I$ $b = -3.13214 + 0.19790I$	$-4.67706 - 11.94260I$	0
$u = -0.29831 - 1.53296I$ $a = -0.998556 + 0.171879I$ $b = -3.13214 - 0.19790I$	$-4.67706 + 11.94260I$	0
$u = -0.20448 + 1.55923I$ $a = -0.716104 + 0.017362I$ $b = -2.44493 + 0.76882I$	$-6.20797 - 0.89847I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.20448-1.55923I$ $a=-0.716104-0.017362I$ $b=-2.44493-0.76882I$	$-6.20797+0.89847I$	0
$u=\ \ 0.45511+1.52515I$ $a=-0.909756-0.162932I$ $b=-2.61224-0.30017I$	$-8.52565+7.69322I$	0
$u=\ \ 0.45511-1.52515I$ $a=-0.909756+0.162932I$ $b=-2.61224+0.30017I$	$-8.52565-7.69322I$	0
$u=-0.33515+1.55812I$ $a=\ \ 0.973849+0.152157I$ $b=\ \ 3.06529-0.26544I$	$-6.6898-18.1097I$	0
$u=-0.33515-1.55812I$ $a=\ \ 0.973849-0.152157I$ $b=\ \ 3.06529+0.26544I$	$-6.6898+18.1097I$	0
$u=-0.20626+1.59303I$ $a=\ \ 0.956730+0.259520I$ $b=\ \ 2.97480+0.00679I$	$-11.9612-9.1487I$	0
$u=-0.20626-1.59303I$ $a=\ \ 0.956730-0.259520I$ $b=\ \ 2.97480-0.00679I$	$-11.9612+9.1487I$	0
$u=\ \ 0.28238+1.61861I$ $a=-0.846541-0.096461I$ $b=-2.83405-0.09721I$	$-9.60077+2.12615I$	0
$u=\ \ 0.28238-1.61861I$ $a=-0.846541+0.096461I$ $b=-2.83405+0.09721I$	$-9.60077-2.12615I$	0
$u=-0.07462+1.67704I$ $a=\ \ 0.724399+0.036666I$ $b=\ \ 2.69499-0.47686I$	$-10.05180+3.11146I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.07462-1.67704I$ $a=\ 0.724399-0.036666I$ $b=\ 2.69499+0.47686I$	$-10.05180-3.11146I$	0
$u=-0.34792+1.64698I$ $a=\ 0.672940-0.035628I$ $b=\ 2.25801-0.47892I$	$-9.61907-5.52901I$	0
$u=-0.34792-1.64698I$ $a=\ 0.672940+0.035628I$ $b=\ 2.25801+0.47892I$	$-9.61907+5.52901I$	0
$u=\ 0.263141+0.010603I$ $a=-1.52722-3.15353I$ $b=-1.49486+0.84774I$	$2.12025+6.04650I$	$10.1944-10.1636I$
$u=\ 0.263141-0.010603I$ $a=-1.52722+3.15353I$ $b=-1.49486-0.84774I$	$2.12025-6.04650I$	$10.1944+10.1636I$
$u=-0.0385712+0.1131690I$ $a=\ 12.04120-6.17358I$ $b=-0.105353+0.558006I$	$-1.02856-3.32615I$	$-5.3149+16.6260I$
$u=-0.0385712-0.1131690I$ $a=\ 12.04120+6.17358I$ $b=-0.105353-0.558006I$	$-1.02856+3.32615I$	$-5.3149-16.6260I$
$u=\ 0.0748114+0.0173435I$ $a=\ 7.05820+9.61837I$ $b=\ 1.30770-1.07243I$	$2.76609+1.01918I$	$12.85545-4.57171I$
$u=\ 0.0748114-0.0173435I$ $a=\ 7.05820-9.61837I$ $b=\ 1.30770+1.07243I$	$2.76609-1.01918I$	$12.85545+4.57171I$

II. $I_2^u =$
$\langle -u^{27}+18u^{26}+\cdots+b+13,\ -5u^{26}+5u^{25}+\cdots+a-5,\ u^{28}-u^{27}+\cdots+6u^2+1\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 5u^{26} - 5u^{25} + \cdots - 5u + 5 \\ u^{27} - 18u^{26} + \cdots + 6u - 13 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{27} + 31u^{26} + \cdots - 11u + 23 \\ 7u^{27} + 10u^{26} + \cdots + 5u + 12 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -4u^{27} + 18u^{26} + \cdots - 8u + 9 \\ 7u^{26} - 8u^{25} + \cdots + u + 3 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{27} - 14u^{25} + \cdots - 2u - 3 \\ 2u^{27} - 5u^{26} + \cdots + 3u - 2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{27} + 4u^{26} + \cdots + 5u + 4 \\ 5u^{27} - 6u^{26} + \cdots + 6u - 2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{27} - 14u^{25} + \cdots - 2u - 2 \\ 2u^{27} - 4u^{26} + \cdots + 3u - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{26} + 14u^{24} + \cdots + 2u + 4 \\ u^{27} - 4u^{26} + \cdots - 2u - 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -46u^{27}+54u^{26}-647u^{25}+688u^{24}-3899u^{23}+3914u^{22}-13105u^{21}+13115u^{20}-26703u^{19}+28504u^{18}-33608u^{17}+40977u^{16}-26441u^{15}+36742u^{14}-16280u^{13}+15756u^{12}-14162u^{11}-2456u^{10}-12262u^9-4716u^8-5384u^7-524u^6-876u^5+402u^4-191u^3+10u^2-61u-3$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 14u^{27} + \cdots - 14u + 1$
c_2	$u^{28} - 7u^{26} + \cdots - 7u^2 + 1$
c_3	$u^{28} + 4u^{25} + \cdots - u^2 + 1$
c_4	$u^{28} + 14u^{26} + \cdots + 2u + 1$
c_5	$u^{28} - 7u^{26} + \cdots - 7u^2 + 1$
c_6	$u^{28} - 4u^{27} + \cdots - u + 1$
c_7, c_8	$u^{28} - u^{27} + \cdots + 6u^2 + 1$
c_9	$u^{28} + 2u^{26} + \cdots + 2u + 1$
c_{10}	$u^{28} + 4u^{27} + \cdots + u + 1$
c_{11}	$u^{28} + 14u^{26} + \cdots - 2u + 1$
c_{12}	$u^{28} + u^{27} + \cdots + 6u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} + 14y^{27} + \cdots + 22y + 1$
c_2, c_5	$y^{28} - 14y^{27} + \cdots - 14y + 1$
c_3	$y^{28} + 16y^{26} + \cdots - 2y + 1$
c_4, c_{11}	$y^{28} + 28y^{27} + \cdots + 36y + 1$
c_6, c_{10}	$y^{28} - 22y^{27} + \cdots - 25y + 1$
c_7, c_8, c_{12}	$y^{28} + 29y^{27} + \cdots + 12y + 1$
c_9	$y^{28} + 4y^{27} + \cdots + 8y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.057970 + 0.166282I$ $a = -0.208823 - 1.175340I$ $b = -0.112755 + 0.344968I$	$-3.97772 + 1.20140I$	$-2.85140 + 0.11450I$
$u = 1.057970 - 0.166282I$ $a = -0.208823 + 1.175340I$ $b = -0.112755 - 0.344968I$	$-3.97772 - 1.20140I$	$-2.85140 - 0.11450I$
$u = -0.139257 + 1.222350I$ $a = -0.540849 - 0.166027I$ $b = 1.046250 + 0.304982I$	$-0.73942 - 7.06380I$	$6.87825 + 9.81843I$
$u = -0.139257 - 1.222350I$ $a = -0.540849 + 0.166027I$ $b = 1.046250 - 0.304982I$	$-0.73942 + 7.06380I$	$6.87825 - 9.81843I$
$u = -0.109455 + 1.235990I$ $a = 0.581933 + 0.254472I$ $b = -0.608729 - 0.841553I$	$-0.11256 - 1.80905I$	$8.89618 + 4.13642I$
$u = -0.109455 - 1.235990I$ $a = 0.581933 - 0.254472I$ $b = -0.608729 + 0.841553I$	$-0.11256 + 1.80905I$	$8.89618 - 4.13642I$
$u = -0.309375 + 0.661931I$ $a = -0.840544 + 0.816321I$ $b = -1.90631 + 0.13994I$	$1.43275 + 5.42505I$	$2.75477 - 4.39975I$
$u = -0.309375 - 0.661931I$ $a = -0.840544 - 0.816321I$ $b = -1.90631 - 0.13994I$	$1.43275 - 5.42505I$	$2.75477 + 4.39975I$
$u = -0.046105 + 1.293450I$ $a = 0.722624 + 0.538641I$ $b = 1.213690 - 0.485372I$	$-1.64140 - 3.06077I$	$3.78856 + 1.96073I$
$u = -0.046105 - 1.293450I$ $a = 0.722624 - 0.538641I$ $b = 1.213690 + 0.485372I$	$-1.64140 + 3.06077I$	$3.78856 - 1.96073I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.234718+1.284670I$ $a=-0.243223+0.065777I$ $b=\ \ 0.001021-0.413753I$	$-4.35783-2.56470I$	$-7.06193+4.48383I$
$u=-0.234718-1.284670I$ $a=-0.243223-0.065777I$ $b=\ \ 0.001021+0.413753I$	$-4.35783+2.56470I$	$-7.06193-4.48383I$
$u=-0.223370+0.627076I$ $a=\ \ 1.067160-0.873388I$ $b=\ \ 1.72440-0.74819I$	$2.23223+0.57114I$	$3.41868+3.39984I$
$u=-0.223370-0.627076I$ $a=\ \ 1.067160+0.873388I$ $b=\ \ 1.72440+0.74819I$	$2.23223-0.57114I$	$3.41868-3.39984I$
$u=-0.577599+0.286788I$ $a=\ \ 0.060532+0.910181I$ $b=-0.609362-0.366066I$	$-0.913262-0.484116I$	$6.63213-1.77950I$
$u=-0.577599-0.286788I$ $a=\ \ 0.060532-0.910181I$ $b=-0.609362+0.366066I$	$-0.913262+0.484116I$	$6.63213+1.77950I$
$u=\ \ 0.11418+1.43429I$ $a=-1.252930+0.057473I$ $b=-3.46724+0.07220I$	$-5.51846+4.88137I$	$0.-6.63417I$
$u=\ \ 0.11418-1.43429I$ $a=-1.252930-0.057473I$ $b=-3.46724-0.07220I$	$-5.51846-4.88137I$	$0.+6.63417I$
$u=\ \ 0.34785+1.42900I$ $a=-0.921646-0.108794I$ $b=-2.78620-0.61422I$	$-8.38147+3.80359I$	$-4.21890+0.I$
$u=\ \ 0.34785-1.42900I$ $a=-0.921646+0.108794I$ $b=-2.78620+0.61422I$	$-8.38147-3.80359I$	$-4.21890+0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.094690+0.468230I$ $a=\ 1.82899-1.34340I$ $b=\ 0.601135-0.815470I$	$1.46551+2.52456I$	$5.53353-6.54159I$
$u=-0.094690-0.468230I$ $a=\ 1.82899+1.34340I$ $b=\ 0.601135+0.815470I$	$1.46551-2.52456I$	$5.53353+6.54159I$
$u=-0.03077+1.53379I$ $a=\ 0.773157-0.656502I$ $b=\ 2.24154-0.84097I$	$-7.92937-2.20751I$	$5.54405+8.63255I$
$u=-0.03077-1.53379I$ $a=\ 0.773157+0.656502I$ $b=\ 2.24154+0.84097I$	$-7.92937+2.20751I$	$5.54405-8.63255I$
$u=\ 0.398184+0.210426I$ $a=-1.82799-2.67857I$ $b=\ 0.055600+0.215565I$	$-0.82870-3.05974I$	$10.34175-2.88215I$
$u=\ 0.398184-0.210426I$ $a=-1.82799+2.67857I$ $b=\ 0.055600-0.215565I$	$-0.82870+3.05974I$	$10.34175+2.88215I$
$u=\ 0.34716+1.61506I$ $a=\ 0.801609+0.007769I$ $b=\ 2.60695+0.24121I$	$-10.20870+6.58276I$	0
$u=\ 0.34716-1.61506I$ $a=\ 0.801609-0.007769I$ $b=\ 2.60695-0.24121I$	$-10.20870-6.58276I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28}-14u^{27}+\cdots-14u+1)(u^{119}+51u^{118}+\cdots+26772u+361)$
c_2	$(u^{28}-7u^{26}+\cdots-7u^2+1)(u^{119}+7u^{118}+\cdots-208u-19)$
c_3	$(u^{28}+4u^{25}+\cdots-u^2+1)(u^{119}-u^{118}+\cdots-2.51854\times10^7u-1.15228\times10^7)$
c_4	$(u^{28}+14u^{26}+\cdots+2u+1)(u^{119}-3u^{118}+\cdots-2732u-8803)$
c_5	$(u^{28}-7u^{26}+\cdots-7u^2+1)(u^{119}+7u^{118}+\cdots-208u-19)$
c_6	$(u^{28}-4u^{27}+\cdots-u+1)(u^{119}+3u^{118}+\cdots-4107u-2939)$
c_7, c_8	$(u^{28}-u^{27}+\cdots+6u^2+1)(u^{119}-2u^{118}+\cdots-26u-1)$
c_9	$(u^{28}+2u^{26}+\cdots+2u+1)(u^{119}+u^{118}+\cdots+8910u-1089)$
c_{10}	$(u^{28}+4u^{27}+\cdots+u+1)(u^{119}+3u^{118}+\cdots-4107u-2939)$
c_{11}	$(u^{28}+14u^{26}+\cdots-2u+1)(u^{119}-3u^{118}+\cdots-2732u-8803)$
c_{12}	$(u^{28}+u^{27}+\cdots+6u^2+1)(u^{119}-2u^{118}+\cdots-26u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28}+14y^{27}+\cdots+22y+1)$ $\cdot(y^{119}+49y^{118}+\cdots+68785416y-130321)$
c_2, c_5	$(y^{28}-14y^{27}+\cdots-14y+1)(y^{119}-51y^{118}+\cdots+26772y-361)$
c_3	$(y^{28}+16y^{26}+\cdots-2y+1)$ $\cdot(y^{119}+43y^{118}+\cdots-5505345069862148y-132775772528569)$
c_4, c_{11}	$(y^{28}+28y^{27}+\cdots+36y+1)$ $\cdot(y^{119}+95y^{118}+\cdots-90407930y-77492809)$
c_6, c_{10}	$(y^{28}-22y^{27}+\cdots-25y+1)$ $\cdot(y^{119}-75y^{118}+\cdots+495977351y-8637721)$
c_7, c_8, c_{12}	$(y^{28}+29y^{27}+\cdots+12y+1)(y^{119}+120y^{118}+\cdots+210y-1)$
c_9	$(y^{28}+4y^{27}+\cdots+8y+1)$ $\cdot(y^{119}-13y^{118}+\cdots-26164314y-1185921)$