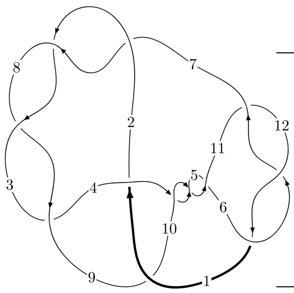
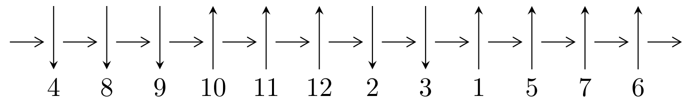
$12a_{1129}$ ($K12a_{1129}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{52} + u^{51} + \cdots - u^2 + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 52 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. $I^u_1 = \langle u^{52} + u^{51} + \cdots - u^2 + 1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^3 - 2u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^6 - 3u^4 - 2u^2 + 1 \\ u^6 + 2u^4 + u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^9 + 4u^7 + 5u^5 - 3u \\ -u^9 - 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{22} + 9u^{20} + \cdots - 2u^2 + 1 \\ -u^{22} - 8u^{20} + \cdots - 6u^4 - u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{12} + 5u^{10} + 9u^8 + 4u^6 - 6u^4 - 5u^2 + 1 \\ -u^{14} - 6u^{12} - 13u^{10} - 10u^8 + 4u^6 + 8u^4 + u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{35} + 14u^{33} + \cdots - 7u^3 - 2u \\ -u^{37} - 15u^{35} + \cdots + u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{45} - 18u^{43} + \cdots + 4u^3 - u \\ u^{45} + 17u^{43} + \cdots + u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{50} - 4u^{49} + \cdots + 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{52} - 13u^{51} + \cdots + 12u + 1$
c_2, c_3, c_7 c_8	$u^{52} + u^{51} + \cdots - u^2 + 1$
c_4, c_5, c_{10}	$u^{52} - u^{51} + \cdots + 3u + 2$
c_6, c_{11}, c_{12}	$u^{52} + u^{51} + \cdots - u^2 + 1$
c_9	$u^{52} - 5u^{51} + \cdots - 40u + 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} + y^{51} + \cdots - 78y + 1$
c_2, c_3, c_7 c_8	$y^{52} - 59y^{51} + \cdots - 2y + 1$
c_4, c_5, c_{10}	$y^{52} - 51y^{51} + \cdots - 13y + 4$
c_6, c_{11}, c_{12}	$y^{52} + 41y^{51} + \cdots - 2y + 1$
c_9	$y^{52} + 5y^{51} + \cdots - 1056y + 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.064343 + 1.078640I$	$-1.40015 + 1.52976I$	$2.75682 - 4.91423I$
$u = 0.064343 - 1.078640I$	$-1.40015 - 1.52976I$	$2.75682 + 4.91423I$
$u = -0.194812 + 1.084730I$	$-8.02816 - 3.09087I$	$-1.45646 + 3.41985I$
$u = -0.194812 - 1.084730I$	$-8.02816 + 3.09087I$	$-1.45646 - 3.41985I$
$u = 0.870013$	2.71773	4.26170
$u = -0.865904 + 0.063981I$	$-1.18889 - 8.35371I$	$2.15555 + 4.84386I$
$u = -0.865904 - 0.063981I$	$-1.18889 + 8.35371I$	$2.15555 - 4.84386I$
$u = 0.863666 + 0.050977I$	$6.35679 + 5.83766I$	$5.11333 - 6.18440I$
$u = 0.863666 - 0.050977I$	$6.35679 - 5.83766I$	$5.11333 + 6.18440I$
$u = -0.861153 + 0.034563I$	$7.49695 - 2.01542I$	$8.10345 + 0.20693I$
$u = -0.861153 - 0.034563I$	$7.49695 + 2.01542I$	$8.10345 - 0.20693I$
$u = 0.827069$	3.33579	1.47640
$u = -0.754834$	-4.86426	0.742790
$u = -0.414003 + 1.212500I$	$-4.72599 + 3.76773I$	0
$u = -0.414003 - 1.212500I$	$-4.72599 - 3.76773I$	0
$u = 0.408857 + 1.226390I$	$2.73124 - 1.27707I$	0
$u = 0.408857 - 1.226390I$	$2.73124 + 1.27707I$	0
$u = 0.140178 + 1.288820I$	$-3.50980 + 2.56064I$	0
$u = 0.140178 - 1.288820I$	$-3.50980 - 2.56064I$	0
$u = -0.404260 + 1.242840I$	$3.76212 - 2.52044I$	0
$u = -0.404260 - 1.242840I$	$3.76212 + 2.52044I$	0
$u = -0.085513 + 1.311070I$	$-6.02869 - 0.13553I$	0
$u = -0.085513 - 1.311070I$	$-6.02869 + 0.13553I$	0
$u = 0.372465 + 1.275890I$	$-0.63054 + 4.31131I$	0
$u = 0.372465 - 1.275890I$	$-0.63054 - 4.31131I$	0
$u = -0.158777 + 1.322390I$	$-5.12877 - 5.76871I$	0
$u = -0.158777 - 1.322390I$	$-5.12877 + 5.76871I$	0
$u = -0.338582 + 1.290210I$	$-8.92793 - 3.96075I$	0
$u = -0.338582 - 1.290210I$	$-8.92793 + 3.96075I$	0
$u = 0.407208 + 1.272530I$	$-1.23247 + 4.57480I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.407208 - 1.272530I$	$-1.23247 - 4.57480I$	0
$u = 0.077570 + 1.343850I$	$-13.98360 - 1.28043I$	0
$u = 0.077570 - 1.343850I$	$-13.98360 + 1.28043I$	0
$u = 0.163062 + 1.343750I$	$-12.9213 + 7.8353I$	0
$u = 0.163062 - 1.343750I$	$-12.9213 - 7.8353I$	0
$u = -0.394503 + 1.299380I$	$3.33743 - 6.51954I$	0
$u = -0.394503 - 1.299380I$	$3.33743 + 6.51954I$	0
$u = 0.394145 + 1.310860I$	$2.10315 + 10.35040I$	0
$u = 0.394145 - 1.310860I$	$2.10315 - 10.35040I$	0
$u = -0.626239$	-4.95895	2.64680
$u = -0.393511 + 1.319500I$	$-5.51559 - 12.87260I$	0
$u = -0.393511 - 1.319500I$	$-5.51559 + 12.87260I$	0
$u = 0.512953 + 0.324766I$	$-7.72361 + 5.51109I$	$-0.86310 - 6.83002I$
$u = 0.512953 - 0.324766I$	$-7.72361 - 5.51109I$	$-0.86310 + 6.83002I$
$u = 0.300905 + 0.497136I$	$-8.45912 - 2.43171I$	$-3.43370 - 0.55580I$
$u = 0.300905 - 0.497136I$	$-8.45912 + 2.43171I$	$-3.43370 + 0.55580I$
$u = -0.483416 + 0.274218I$	$-0.19689 - 3.53557I$	$2.08708 + 9.36661I$
$u = -0.483416 - 0.274218I$	$-0.19689 + 3.53557I$	$2.08708 - 9.36661I$
$u = 0.439508 + 0.162684I$	$0.928018 + 0.546845I$	$7.92121 - 2.35849I$
$u = 0.439508 - 0.162684I$	$0.928018 - 0.546845I$	$7.92121 + 2.35849I$
$u = -0.208432 + 0.394436I$	$-1.026700 + 0.938901I$	$-2.63217 - 1.48374I$
$u = -0.208432 - 0.394436I$	$-1.026700 - 0.938901I$	$-2.63217 + 1.48374I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{52} - 13u^{51} + \cdots + 12u + 1$
c_2, c_3, c_7 c_8	$u^{52} + u^{51} + \cdots - u^2 + 1$
c_4, c_5, c_{10}	$u^{52} - u^{51} + \cdots + 3u + 2$
c_6, c_{11}, c_{12}	$u^{52} + u^{51} + \cdots - u^2 + 1$
c_9	$u^{52} - 5u^{51} + \cdots - 40u + 16$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} + y^{51} + \cdots - 78y + 1$
c_2, c_3, c_7 c_8	$y^{52} - 59y^{51} + \cdots - 2y + 1$
c_4, c_5, c_{10}	$y^{52} - 51y^{51} + \cdots - 13y + 4$
c_6, c_{11}, c_{12}	$y^{52} + 41y^{51} + \cdots - 2y + 1$
c_9	$y^{52} + 5y^{51} + \cdots - 1056y + 256$