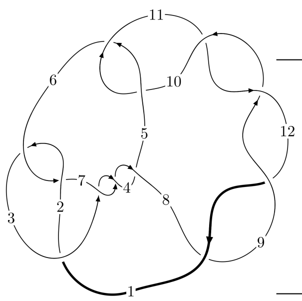
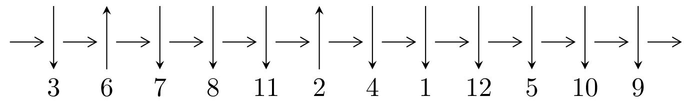
$12a_{0206}$ ($K12a_{0206}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

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

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

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^6 - u^4 + 1 \\ u^6 + 2u^4 + u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^9 + 2u^7 + u^5 - 2u^3 - u \\ -u^9 - 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{14} - 3u^{12} - 4u^{10} - u^8 + 1 \\ -u^{16} - 4u^{14} - 8u^{12} - 8u^{10} - 4u^8 + 2u^6 + 4u^4 + 2u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^{25} + 6u^{23} + \cdots + 2u^3 + u \\ u^{27} + 7u^{25} + \cdots + 3u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{36} - 9u^{34} + \cdots + u^2 + 1 \\ -u^{38} - 10u^{36} + \cdots + 8u^4 + 3u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{47} + 12u^{45} + \cdots + 4u^3 + 2u \\ u^{49} + 13u^{47} + \cdots + 6u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{51} - 4u^{50} + \cdots + 16u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{52} + 29u^{51} + \cdots - 2u + 1$
c_2, c_6	$u^{52} - u^{51} + \cdots - 2u - 1$
c_3, c_4, c_7	$u^{52} + u^{51} + \cdots + 9u - 2$
c_5, c_{10}	$u^{52} + u^{51} + \cdots - 2u - 1$
c_8, c_9, c_{11} c_{12}	$u^{52} + 11u^{51} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} - 11y^{51} + \cdots - 54y + 1$
c_2, c_6	$y^{52} + 29y^{51} + \cdots - 2y + 1$
c_3, c_4, c_7	$y^{52} - 51y^{51} + \cdots + 115y + 4$
c_5, c_{10}	$y^{52} - 11y^{51} + \cdots - 2y + 1$
c_8, c_9, c_{11} c_{12}	$y^{52} + 61y^{51} + \cdots + 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.444793 + 0.901226I$	$0.92885 - 2.07964I$	$-4.26783 + 3.51699I$
$u = -0.444793 - 0.901226I$	$0.92885 + 2.07964I$	$-4.26783 - 3.51699I$
$u = 0.146457 + 0.972329I$	$-1.98877 - 1.22586I$	$-14.2459 + 3.8733I$
$u = 0.146457 - 0.972329I$	$-1.98877 + 1.22586I$	$-14.2459 - 3.8733I$
$u = 0.323497 + 0.988659I$	$-3.15249 + 2.68021I$	$-16.7312 - 6.1438I$
$u = 0.323497 - 0.988659I$	$-3.15249 - 2.68021I$	$-16.7312 + 6.1438I$
$u = 0.456989 + 0.963997I$	$0.08024 + 6.29340I$	$-7.80687 - 10.48412I$
$u = 0.456989 - 0.963997I$	$0.08024 - 6.29340I$	$-7.80687 + 10.48412I$
$u = -0.533289 + 0.935620I$	$8.97543 - 1.96457I$	$-4.12437 + 3.29680I$
$u = -0.533289 - 0.935620I$	$8.97543 + 1.96457I$	$-4.12437 - 3.29680I$
$u = 0.010867 + 1.083970I$	$5.22663 - 3.18836I$	$-9.99011 + 2.49513I$
$u = 0.010867 - 1.083970I$	$5.22663 + 3.18836I$	$-9.99011 - 2.49513I$
$u = 0.533053 + 0.946195I$	$8.84021 + 8.51151I$	$-4.50581 - 8.08698I$
$u = 0.533053 - 0.946195I$	$8.84021 - 8.51151I$	$-4.50581 + 8.08698I$
$u = -0.286778 + 0.838173I$	$-0.49981 - 1.35692I$	$-5.02302 + 4.66234I$
$u = -0.286778 - 0.838173I$	$-0.49981 + 1.35692I$	$-5.02302 - 4.66234I$
$u = -0.844411 + 0.100508I$	$4.53747 + 8.38588I$	$-5.64729 - 5.07323I$
$u = -0.844411 - 0.100508I$	$4.53747 - 8.38588I$	$-5.64729 + 5.07323I$
$u = 0.835966 + 0.104158I$	$4.83277 - 1.89906I$	$-5.09326 + 0.33485I$
$u = 0.835966 - 0.104158I$	$4.83277 + 1.89906I$	$-5.09326 - 0.33485I$
$u = -0.836110 + 0.052296I$	$-3.96880 + 5.07450I$	$-9.58177 - 6.04455I$
$u = -0.836110 - 0.052296I$	$-3.96880 - 5.07450I$	$-9.58177 + 6.04455I$
$u = -0.837189$	-6.56025	-14.2030
$u = 0.800491 + 0.040631I$	$-2.27501 - 0.99664I$	$-5.31105 + 0.16572I$
$u = 0.800491 - 0.040631I$	$-2.27501 + 0.99664I$	$-5.31105 - 0.16572I$
$u = -0.590815 + 0.525994I$	$10.12740 - 2.48798I$	$-1.62823 + 2.66940I$
$u = -0.590815 - 0.525994I$	$10.12740 + 2.48798I$	$-1.62823 - 2.66940I$
$u = 0.595814 + 0.510152I$	$10.06680 - 4.04960I$	$-1.78451 + 2.29010I$
$u = 0.595814 - 0.510152I$	$10.06680 + 4.04960I$	$-1.78451 - 2.29010I$
$u = 0.440029 + 1.215220I$	$-5.96613 + 3.38286I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.440029 - 1.215220I$	$-5.96613 - 3.38286I$	0
$u = -0.436602 + 0.554857I$	$1.87781 - 1.71309I$	$-1.63672 + 4.44020I$
$u = -0.436602 - 0.554857I$	$1.87781 + 1.71309I$	$-1.63672 - 4.44020I$
$u = 0.399851 + 1.232500I$	$0.78270 + 2.35026I$	0
$u = 0.399851 - 1.232500I$	$0.78270 - 2.35026I$	0
$u = 0.474496 + 1.211950I$	$-5.71832 + 5.61366I$	0
$u = 0.474496 - 1.211950I$	$-5.71832 - 5.61366I$	0
$u = -0.402451 + 1.238770I$	$0.46667 + 4.08632I$	0
$u = -0.402451 - 1.238770I$	$0.46667 - 4.08632I$	0
$u = -0.432707 + 1.233580I$	$-7.82605 + 0.62175I$	0
$u = -0.432707 - 1.233580I$	$-7.82605 - 0.62175I$	0
$u = -0.459952 + 1.231280I$	$-10.23690 - 4.62494I$	0
$u = -0.459952 - 1.231280I$	$-10.23690 + 4.62494I$	0
$u = 0.504700 + 1.214320I$	$1.52858 + 6.77648I$	0
$u = 0.504700 - 1.214320I$	$1.52858 - 6.77648I$	0
$u = -0.483738 + 1.224360I$	$-7.45916 - 9.83676I$	0
$u = -0.483738 - 1.224360I$	$-7.45916 + 9.83676I$	0
$u = -0.505337 + 1.218480I$	$1.20269 - 13.28750I$	0
$u = -0.505337 - 1.218480I$	$1.20269 + 13.28750I$	0
$u = 0.475410 + 0.418845I$	$1.55220 - 2.39312I$	$-3.19595 + 4.86079I$
$u = 0.475410 - 0.418845I$	$1.55220 + 2.39312I$	$-3.19595 - 4.86079I$
$u = 0.355912$	-0.860619	-11.7250

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{52} + 29u^{51} + \cdots - 2u + 1$
c_2, c_6	$u^{52} - u^{51} + \cdots - 2u - 1$
c_3, c_4, c_7	$u^{52} + u^{51} + \cdots + 9u - 2$
c_5, c_{10}	$u^{52} + u^{51} + \cdots - 2u - 1$
c_8, c_9, c_{11} c_{12}	$u^{52} + 11u^{51} + \cdots + 2u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} - 11y^{51} + \cdots - 54y + 1$
c_2, c_6	$y^{52} + 29y^{51} + \cdots - 2y + 1$
c_3, c_4, c_7	$y^{52} - 51y^{51} + \cdots + 115y + 4$
c_5, c_{10}	$y^{52} - 11y^{51} + \cdots - 2y + 1$
c_8, c_9, c_{11} c_{12}	$y^{52} + 61y^{51} + \cdots + 2y + 1$