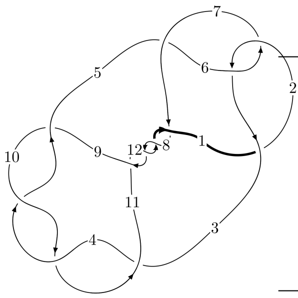
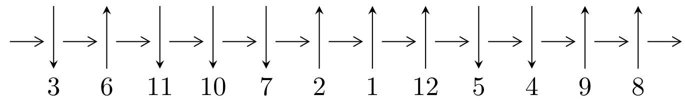
$12a_{0482}$ ($K12a_{0482}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{46} - u^{45} + \cdots - 3u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 46 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. $I_1^u = \langle u^{46} - u^{45} + \cdots - 3u + 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^4 + 3u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^3 + 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^8 + 5u^6 + 7u^4 + 2u^2 + 1 \\ u^8 + 4u^6 + 4u^4 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{12} + 7u^{10} + 17u^8 + 16u^6 + 6u^4 + 5u^2 + 1 \\ u^{12} + 6u^{10} + 12u^8 + 8u^6 + u^4 + 2u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{16} + 9u^{14} + 31u^{12} + 50u^{10} + 39u^8 + 22u^6 + 18u^4 + 4u^2 + 1 \\ u^{16} + 8u^{14} + 24u^{12} + 32u^{10} + 18u^8 + 8u^6 + 8u^4 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{33} - 18u^{31} + \cdots - 8u^3 - u \\ -u^{33} - 17u^{31} + \cdots - 8u^5 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{20} + 11u^{18} + \cdots + 7u^2 + 1 \\ u^{22} + 12u^{20} + \cdots + 8u^4 + 3u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{45} - 4u^{44} + \cdots + 28u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{46} + 17u^{45} + \cdots + 7u + 1$
c_2, c_6	$u^{46} - u^{45} + \cdots - u + 1$
c_3, c_4, c_9 c_{10}	$u^{46} + u^{45} + \cdots + 3u + 1$
c_7, c_8, c_{11} c_{12}	$u^{46} + 5u^{45} + \cdots + 17u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{46} + 25y^{45} + \cdots + 87y + 1$
c_2, c_6	$y^{46} + 17y^{45} + \cdots + 7y + 1$
c_3, c_4, c_9 c_{10}	$y^{46} + 49y^{45} + \cdots + 7y + 1$
c_7, c_8, c_{11} c_{12}	$y^{46} + 53y^{45} + \cdots + 311y + 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.664742 + 0.533075I$	$-7.89200 - 9.32854I$	$-3.38258 + 7.74496I$
$u = \quad 0.664742 - 0.533075I$	$-7.89200 + 9.32854I$	$-3.38258 - 7.74496I$
$u = \quad 0.675457 + 0.508562I$	$-12.18020 - 2.26977I$	$-7.30774 + 2.96998I$
$u = \quad 0.675457 - 0.508562I$	$-12.18020 + 2.26977I$	$-7.30774 - 2.96998I$
$u = -0.656275 + 0.523642I$	$-6.28780 + 3.84503I$	$-1.26707 - 3.22196I$
$u = -0.656275 - 0.523642I$	$-6.28780 - 3.84503I$	$-1.26707 + 3.22196I$
$u = \quad 0.676414 + 0.480624I$	$-8.04831 + 4.81861I$	$-3.86511 - 1.90322I$
$u = \quad 0.676414 - 0.480624I$	$-8.04831 - 4.81861I$	$-3.86511 + 1.90322I$
$u = -0.663474 + 0.486446I$	$-6.39825 + 0.60169I$	$-1.58447 - 2.81268I$
$u = -0.663474 - 0.486446I$	$-6.39825 - 0.60169I$	$-1.58447 + 2.81268I$
$u = -0.425584 + 0.580860I$	$0.50678 + 6.63328I$	$0.39470 - 9.97215I$
$u = -0.425584 - 0.580860I$	$0.50678 - 6.63328I$	$0.39470 + 9.97215I$
$u = \quad 0.370658 + 0.572348I$	$1.34286 - 1.47615I$	$2.76728 + 4.83936I$
$u = \quad 0.370658 - 0.572348I$	$1.34286 + 1.47615I$	$2.76728 - 4.83936I$
$u = \quad 0.042363 + 0.667552I$	$3.14066 - 2.54958I$	$7.36401 + 3.99068I$
$u = \quad 0.042363 - 0.667552I$	$3.14066 + 2.54958I$	$7.36401 - 3.99068I$
$u = -0.471349 + 0.440857I$	$-3.50342 + 1.63744I$	$-7.27018 - 4.90319I$
$u = -0.471349 - 0.440857I$	$-3.50342 - 1.63744I$	$-7.27018 + 4.90319I$
$u = -0.04737 + 1.43621I$	$4.81615 - 1.87426I$	0
$u = -0.04737 - 1.43621I$	$4.81615 + 1.87426I$	0
$u = -0.487759 + 0.265494I$	$-0.43809 - 3.45776I$	$-3.80106 + 2.57819I$
$u = -0.487759 - 0.265494I$	$-0.43809 + 3.45776I$	$-3.80106 - 2.57819I$
$u = -0.11192 + 1.48925I$	$2.82329 + 3.62355I$	0
$u = -0.11192 - 1.48925I$	$2.82329 - 3.62355I$	0
$u = \quad 0.05755 + 1.49977I$	$6.38122 - 1.82382I$	0
$u = \quad 0.05755 - 1.49977I$	$6.38122 + 1.82382I$	0
$u = \quad 0.21458 + 1.49604I$	$-1.61318 + 1.60482I$	0
$u = \quad 0.21458 - 1.49604I$	$-1.61318 - 1.60482I$	0
$u = -0.20676 + 1.50200I$	$0.09096 + 3.73634I$	0
$u = -0.20676 - 1.50200I$	$0.09096 - 3.73634I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.21685 + 1.51393I$	$-5.56462 - 5.50465I$	0
$u = \quad 0.21685 - 1.51393I$	$-5.56462 + 5.50465I$	0
$u = -0.20731 + 1.52424I$	$0.43892 + 6.97774I$	0
$u = -0.20731 - 1.52424I$	$0.43892 - 6.97774I$	0
$u = \quad 0.21236 + 1.52855I$	$-1.11770 - 12.51940I$	0
$u = \quad 0.21236 - 1.52855I$	$-1.11770 + 12.51940I$	0
$u = \quad 0.415258 + 0.188192I$	$0.263014 - 1.271440I$	$-3.04057 + 3.64034I$
$u = \quad 0.415258 - 0.188192I$	$0.263014 + 1.271440I$	$-3.04057 - 3.64034I$
$u = \quad 0.09628 + 1.54151I$	$8.41953 - 3.11711I$	0
$u = \quad 0.09628 - 1.54151I$	$8.41953 + 3.11711I$	0
$u = \quad 0.238736 + 0.384624I$	$0.049172 - 0.835852I$	$1.31520 + 8.15747I$
$u = \quad 0.238736 - 0.384624I$	$0.049172 + 0.835852I$	$1.31520 - 8.15747I$
$u = -0.11146 + 1.54382I$	$7.60893 + 8.52667I$	0
$u = -0.11146 - 1.54382I$	$7.60893 - 8.52667I$	0
$u = \quad 0.00802 + 1.55602I$	$10.58230 - 2.70871I$	0
$u = \quad 0.00802 - 1.55602I$	$10.58230 + 2.70871I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{46} + 17u^{45} + \cdots + 7u + 1$
c_2, c_6	$u^{46} - u^{45} + \cdots - u + 1$
c_3, c_4, c_9 c_{10}	$u^{46} + u^{45} + \cdots + 3u + 1$
c_7, c_8, c_{11} c_{12}	$u^{46} + 5u^{45} + \cdots + 17u + 3$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{46} + 25y^{45} + \cdots + 87y + 1$
c_2, c_6	$y^{46} + 17y^{45} + \cdots + 7y + 1$
c_3, c_4, c_9 c_{10}	$y^{46} + 49y^{45} + \cdots + 7y + 1$
c_7, c_8, c_{11} c_{12}	$y^{46} + 53y^{45} + \cdots + 311y + 9$