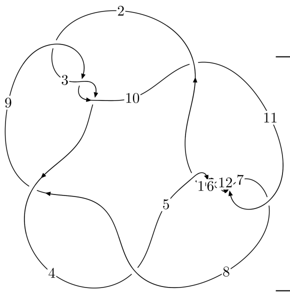
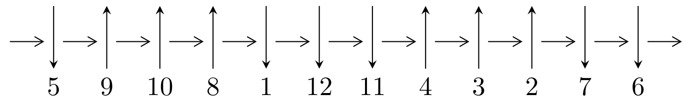
$12a_{1282}$ $(K12a_{1282})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{31} + u^{30} + \cdots - 2u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 31 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. $I^u_1 = \langle u^{31} + u^{30} + \cdots - 2u - 1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^3 - 2u \\ u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^8 + 5u^6 + 7u^4 + 4u^2 + 1 \\ u^{10} + 6u^8 + 11u^6 + 6u^4 - u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{14} + 9u^{12} + 30u^{10} + 47u^8 + 38u^6 + 16u^4 + 4u^2 + 1 \\ u^{16} + 10u^{14} + 38u^{12} + 68u^{10} + 56u^8 + 14u^6 - 2u^4 + 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^9 - 6u^7 - 11u^5 - 6u^3 + u \\ u^9 + 5u^7 + 7u^5 + 4u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{28} - 19u^{26} + \cdots + 5u^2 + 1 \\ u^{28} + 18u^{26} + \cdots + 72u^6 + 19u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{30} + 4u^{29} + 88u^{28} + 84u^{27} + 856u^{26} + 772u^{25} + 4844u^{24} + 4076u^{23} + 17652u^{22} + 13644u^{21} + 43300u^{20} + 30144u^{19} + 72568u^{18} + 44340u^{17} + 82620u^{16} + 42724u^{15} + 62520u^{14} + 25864u^{13} + 30820u^{12} + 9340u^{11} + 10724u^{10} + 2272u^9 + 3660u^8 + 664u^7 + 1124u^6 + 108u^5 + 140u^4 - 44u^3 + 20u^2 - 28u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_6 c_7, c_{11}, c_{12}	$u^{31} + u^{30} + \cdots - 2u - 1$
c_2, c_3, c_9	$u^{31} + u^{30} + \cdots + 2u - 1$
c_4, c_8, c_{10}	$u^{31} - 3u^{30} + \cdots - 27u + 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_6 c_7, c_{11}, c_{12}	$y^{31} + 43y^{30} + \cdots - 8y - 1$
c_2, c_3, c_9	$y^{31} - 25y^{30} + \cdots - 8y - 1$
c_4, c_8, c_{10}	$y^{31} + 27y^{30} + \cdots - 119y - 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.233995+1.062500I$	$2.70695-0.12674I$	$4.66869-0.47422I$
$u=-0.233995-1.062500I$	$2.70695+0.12674I$	$4.66869+0.47422I$
$u=-0.057629+1.115900I$	$4.56522+1.48077I$	$5.55942-4.67239I$
$u=-0.057629-1.115900I$	$4.56522-1.48077I$	$5.55942+4.67239I$
$u=\ \ 0.245809+1.107520I$	$-0.77465-4.19431I$	$1.26264+4.05555I$
$u=\ \ 0.245809-1.107520I$	$-0.77465+4.19431I$	$1.26264-4.05555I$
$u=-0.250403+1.139970I$	$3.55407+8.50807I$	$5.61234-6.50090I$
$u=-0.250403-1.139970I$	$3.55407-8.50807I$	$5.61234+6.50090I$
$u=\ \ 0.093308+1.206050I$	$9.88022-3.25617I$	$10.40235+3.78646I$
$u=\ \ 0.093308-1.206050I$	$9.88022+3.25617I$	$10.40235-3.78646I$
$u=-0.497952+0.387936I$	$-1.28060+5.95602I$	$1.10734-7.09363I$
$u=-0.497952-0.387936I$	$-1.28060-5.95602I$	$1.10734+7.09363I$
$u=\ \ 0.501664+0.346327I$	$-5.34724-1.65915I$	$-3.47730+3.92327I$
$u=\ \ 0.501664-0.346327I$	$-5.34724+1.65915I$	$-3.47730-3.92327I$
$u=\ \ 0.251561+0.534036I$	$4.26948-2.12613I$	$7.78261+6.10454I$
$u=\ \ 0.251561-0.534036I$	$4.26948+2.12613I$	$7.78261-6.10454I$
$u=-0.506752+0.300569I$	$-1.53910-2.63441I$	$-0.000560-0.254726I$
$u=-0.506752-0.300569I$	$-1.53910+2.63441I$	$-0.000560+0.254726I$
$u=\ \ 0.385420$	2.64216	0.0271240
$u=-0.193530+0.306617I$	$0.008601+0.713717I$	$0.31670-9.78617I$
$u=-0.193530-0.306617I$	$0.008601-0.713717I$	$0.31670+9.78617I$
$u=-0.05101+1.74665I$	$12.81940+0.99880I$	0
$u=-0.05101-1.74665I$	$12.81940-0.99880I$	0
$u=\ \ 0.05931+1.75698I$	$9.55603-5.46146I$	0
$u=\ \ 0.05931-1.75698I$	$9.55603+5.46146I$	0
$u=-0.01191+1.76227I$	$15.0429+1.7587I$	0
$u=-0.01191-1.76227I$	$15.0429-1.7587I$	0
$u=-0.06271+1.76571I$	$14.0570+9.8419I$	0
$u=-0.06271-1.76571I$	$14.0570-9.8419I$	0
$u=\ \ 0.02152+1.78217I$	$-18.6689-3.7508I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.02152 - 1.78217I$	$-18.6689 + 3.7508I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5, c_6 c_7, c_{11}, c_{12}	$u^{31} + u^{30} + \cdots - 2u - 1$
c_2, c_3, c_9	$u^{31} + u^{30} + \cdots + 2u - 1$
c_4, c_8, c_{10}	$u^{31} - 3u^{30} + \cdots - 27u + 8$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_6 c_7, c_{11}, c_{12}	$y^{31} + 43y^{30} + \cdots - 8y - 1$
c_2, c_3, c_9	$y^{31} - 25y^{30} + \cdots - 8y - 1$
c_4, c_8, c_{10}	$y^{31} + 27y^{30} + \cdots - 119y - 64$