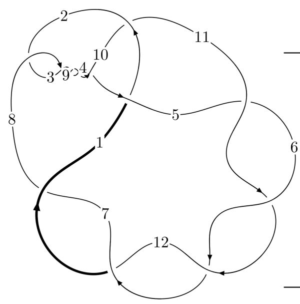
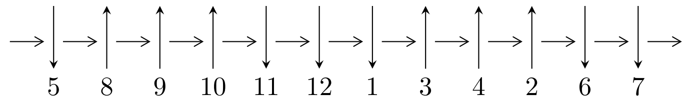
$12a_{1273}$ $(K12a_{1273})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{30} - u^{29} + \cdots - u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 30 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. $I_1^u = \langle u^{30} - u^{29} + \cdots - u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^7 + 4u^5 - 4u^3 + 2u \\ u^7 - 3u^5 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{18} + 11u^{16} - 48u^{14} + 107u^{12} - 133u^{10} + 95u^8 - 34u^6 + 2u^4 + u^2 + 1 \\ u^{18} - 10u^{16} + 37u^{14} - 60u^{12} + 35u^{10} + 8u^8 - 16u^6 + 4u^4 - u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^8 + 5u^6 - 7u^4 + 2u^2 + 1 \\ u^{10} - 6u^8 + 11u^6 - 6u^4 + u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{19} + 12u^{17} - 58u^{15} + 144u^{13} - 193u^{11} + 130u^9 - 26u^7 - 14u^5 + 5u^3 \\ u^{21} - 13u^{19} + \cdots + u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^{29} - 18u^{27} + \cdots - 8u^3 + u \\ -u^{29} + 17u^{27} + \cdots + u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{27} - 72u^{25} + 560u^{23} - 4u^{22} - 2464u^{21} + 60u^{20} + 6748u^{19} - 376u^{18} - 11928u^{17} + 1276u^{16} + 13628u^{15} - 2544u^{14} - 9672u^{13} + 3024u^{12} + 3680u^{11} - 2060u^{10} - 256u^9 + 696u^8 - 296u^7 - 76u^6 + 52u^5 + 16u^4 + 28u^3 - 12u^2 - 12u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{30} + 5u^{29} + \cdots + 17u + 1$
c_2, c_3, c_4 c_8, c_9	$u^{30} - u^{29} + \cdots - u + 1$
c_5, c_6, c_7 c_{11}, c_{12}	$u^{30} + u^{29} + \cdots + u + 1$
c_{10}	$u^{30} - 5u^{29} + \cdots - 17u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{30} + y^{29} + \cdots - 209y + 1$
c_2, c_3, c_4 c_5, c_6, c_7 c_8, c_9, c_{11} c_{12}	$y^{30} - 39y^{29} + \cdots + 3y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.956303 + 0.304469I$	$5.78714I$	$0. - 7.32757I$
$u = \ \ 0.956303 - 0.304469I$	$-\ 5.78714I$	$0. + 7.32757I$
$u = -0.955223 + 0.231940I$	$3.39527 - 3.00004I$	$6.38473 + 5.89581I$
$u = -0.955223 - 0.231940I$	$3.39527 + 3.00004I$	$6.38473 - 5.89581I$
$u = -0.964765 + 0.349999I$	$-9.41687 - 7.29529I$	$-1.29292 + 5.67601I$
$u = -0.964765 - 0.349999I$	$-9.41687 + 7.29529I$	$-1.29292 - 5.67601I$
$u = \ \ 0.928951 + 0.109038I$	$2.11566 + 0.22358I$	$2.86129 + 1.31411I$
$u = \ \ 0.928951 - 0.109038I$	$2.11566 - 0.22358I$	$2.86129 - 1.31411I$
$u = -1.09639$	-5.79658	1.57890
$u = \ \ 0.591727 + 0.392754I$	$-11.51410 - 0.86219I$	$-3.48471 - 2.06303I$
$u = \ \ 0.591727 - 0.392754I$	$-11.51410 + 0.86219I$	$-3.48471 + 2.06303I$
$u = -0.555182 + 0.261272I$	$-2.11566 + 0.22358I$	$-2.86129 + 1.31411I$
$u = -0.555182 - 0.261272I$	$-2.11566 - 0.22358I$	$-2.86129 - 1.31411I$
$u = \ \ 0.155952 + 0.575624I$	$-12.85810 + 4.15601I$	$-6.61449 - 3.95577I$
$u = \ \ 0.155952 - 0.575624I$	$-12.85810 - 4.15601I$	$-6.61449 + 3.95577I$
$u = -0.150182 + 0.513339I$	$-3.39527 - 3.00004I$	$-6.38473 + 5.89581I$
$u = -0.150182 - 0.513339I$	$-3.39527 + 3.00004I$	$-6.38473 - 5.89581I$
$u = \ \ 0.151512 + 0.367668I$	$0.891636I$	$0. - 7.39939I$
$u = \ \ 0.151512 - 0.367668I$	$-\ 0.891636I$	$0. + 7.39939I$
$u = -1.61197$	-4.27207	-1.99300
$u = \ \ 1.65244$	5.79658	-1.57890
$u = -1.70383 + 0.03647I$	$11.51410 - 0.86219I$	0
$u = -1.70383 - 0.03647I$	$11.51410 + 0.86219I$	0
$u = -1.70626 + 0.07787I$	$9.41687 - 7.29529I$	$0. + 5.67601I$
$u = -1.70626 - 0.07787I$	$9.41687 + 7.29529I$	$0. - 5.67601I$
$u = \ \ 1.70771 + 0.05962I$	$12.85810 + 4.15601I$	$6.61449 - 3.95577I$
$u = \ \ 1.70771 - 0.05962I$	$12.85810 - 4.15601I$	$6.61449 + 3.95577I$
$u = \ \ 1.70693 + 0.09182I$	$9.05110I$	$0. - 4.22365I$
$u = \ \ 1.70693 - 0.09182I$	$-\ 9.05110I$	$0. + 4.22365I$
$u = \ \ 1.72865$	4.27207	1.99300

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{30}+5u^{29}+\cdots+17u+1$
c_2, c_3, c_4 c_8, c_9	$u^{30}-u^{29}+\cdots-u+1$
c_5, c_6, c_7 c_{11}, c_{12}	$u^{30}+u^{29}+\cdots+u+1$
c_{10}	$u^{30}-5u^{29}+\cdots-17u+1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{30} + y^{29} + \cdots - 209y + 1$
c_2, c_3, c_4 c_5, c_6, c_7 c_8, c_9, c_{11} c_{12}	$y^{30} - 39y^{29} + \cdots + 3y + 1$