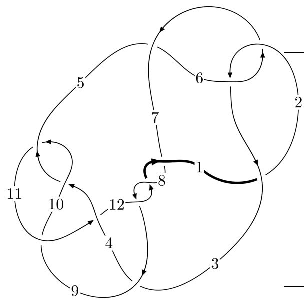
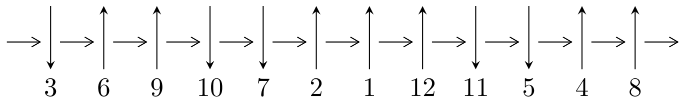
$12a_{0385}$ $(K12a_{0385})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{80} + u^{79} + \cdots + 2u^4 + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 80 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. $I_1^u = \langle u^{80} + u^{79} + \cdots + 2u^4 + 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^4 - u^2 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^7 - 2u^5 + 2u^3 \\ u^7 - u^5 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{12} - 3u^{10} + 5u^8 - 4u^6 + 2u^4 - u^2 + 1 \\ -u^{14} + 4u^{12} - 7u^{10} + 6u^8 - 2u^6 - u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{20} - 5u^{18} + 13u^{16} - 20u^{14} + 20u^{12} - 13u^{10} + 7u^8 - 4u^6 + 3u^4 - u^2 + 1 \\ -u^{22} + 6u^{20} + \cdots + 2u^4 - u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{28} - 7u^{26} + \cdots - u^2 + 1 \\ -u^{30} + 8u^{28} + \cdots - 4u^6 - u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{57} + 14u^{55} + \cdots + 2u^3 - u \\ u^{59} - 15u^{57} + \cdots + u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{36} - 9u^{34} + \cdots - u^2 + 1 \\ u^{36} - 8u^{34} + \cdots - 4u^8 + u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{78} - 76u^{76} + \cdots - 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{80} + 29u^{79} + \cdots - 8u^2 + 1$
c_2, c_6	$u^{80} - u^{79} + \cdots - 4u^3 + 1$
c_3	$u^{80} + u^{79} + \cdots + 256u + 97$
c_4, c_{10}	$u^{80} - u^{79} + \cdots + 2u^4 + 1$
c_7, c_8, c_{12}	$u^{80} + 5u^{79} + \cdots + 24u + 1$
c_9	$u^{80} + 39u^{79} + \cdots + 4u^2 + 1$
c_{11}	$u^{80} - 3u^{79} + \cdots + 800u + 851$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{80} + 45y^{79} + \cdots - 16y + 1$
c_2, c_6	$y^{80} + 29y^{79} + \cdots - 8y^2 + 1$
c_3	$y^{80} + 9y^{79} + \cdots + 10512y + 9409$
c_4, c_{10}	$y^{80} - 39y^{79} + \cdots + 4y^2 + 1$
c_7, c_8, c_{12}	$y^{80} + 81y^{79} + \cdots + 8y + 1$
c_9	$y^{80} + 5y^{79} + \cdots + 8y + 1$
c_{11}	$y^{80} + 29y^{79} + \cdots + 19021504y + 724201$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.974248 + 0.243707I$	$-0.341105 - 0.923106I$	0
$u = 0.974248 - 0.243707I$	$-0.341105 + 0.923106I$	0
$u = -0.798815 + 0.582962I$	$-2.45122 - 4.26356I$	0
$u = -0.798815 - 0.582962I$	$-2.45122 + 4.26356I$	0
$u = -0.760408 + 0.601524I$	$-6.49087 + 2.34742I$	$-2.84735 - 3.42112I$
$u = -0.760408 - 0.601524I$	$-6.49087 - 2.34742I$	$-2.84735 + 3.42112I$
$u = 0.784181 + 0.559828I$	$-1.03117 - 1.02296I$	$3.10972 + 3.14213I$
$u = 0.784181 - 0.559828I$	$-1.03117 + 1.02296I$	$3.10972 - 3.14213I$
$u = -0.728858 + 0.618278I$	$-2.22839 + 8.96435I$	$2.00000 - 8.27939I$
$u = -0.728858 - 0.618278I$	$-2.22839 - 8.96435I$	$2.00000 + 8.27939I$
$u = -1.029920 + 0.233477I$	$-1.08076 - 4.22509I$	0
$u = -1.029920 - 0.233477I$	$-1.08076 + 4.22509I$	0
$u = 0.723078 + 0.602518I$	$-0.81811 - 3.55737I$	$3.81185 + 3.70716I$
$u = 0.723078 - 0.602518I$	$-0.81811 + 3.55737I$	$3.81185 - 3.70716I$
$u = 1.021260 + 0.405865I$	$-1.70172 - 1.76133I$	0
$u = 1.021260 - 0.405865I$	$-1.70172 + 1.76133I$	0
$u = -1.075770 + 0.327642I$	$-5.25765 + 0.50983I$	0
$u = -1.075770 - 0.327642I$	$-5.25765 - 0.50983I$	0
$u = 0.996305 + 0.530127I$	$2.55643 + 0.13963I$	0
$u = 0.996305 - 0.530127I$	$2.55643 - 0.13963I$	0
$u = -1.014540 + 0.534615I$	$2.77964 + 5.23374I$	0
$u = -1.014540 - 0.534615I$	$2.77964 - 5.23374I$	0
$u = -1.094730 + 0.408125I$	$-2.84165 + 5.68344I$	0
$u = -1.094730 - 0.408125I$	$-2.84165 - 5.68344I$	0
$u = -0.276879 + 0.781910I$	$-4.43959 - 10.77180I$	$0.62357 + 6.97709I$
$u = -0.276879 - 0.781910I$	$-4.43959 + 10.77180I$	$0.62357 - 6.97709I$
$u = 0.275922 + 0.773655I$	$-2.95631 + 5.26247I$	$2.70471 - 2.47758I$
$u = 0.275922 - 0.773655I$	$-2.95631 - 5.26247I$	$2.70471 + 2.47758I$
$u = -0.258532 + 0.778086I$	$-8.88148 - 3.93678I$	$-3.71532 + 2.43295I$
$u = -0.258532 - 0.778086I$	$-8.88148 + 3.93678I$	$-3.71532 - 2.43295I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.549018 + 0.608925I$	$3.86584 - 4.65764I$	$7.60494 + 6.72667I$
$u = \quad 0.549018 - 0.608925I$	$3.86584 + 4.65764I$	$7.60494 - 6.72667I$
$u = -1.071790 + 0.510904I$	$-0.83622 + 4.86099I$	0
$u = -1.071790 - 0.510904I$	$-0.83622 - 4.86099I$	0
$u = \quad 1.094840 + 0.465113I$	$-2.46387 - 1.65619I$	0
$u = \quad 1.094840 - 0.465113I$	$-2.46387 + 1.65619I$	0
$u = -0.238763 + 0.767511I$	$-4.99864 + 2.98355I$	$-0.37409 - 2.63773I$
$u = -0.238763 - 0.767511I$	$-4.99864 - 2.98355I$	$-0.37409 + 2.63773I$
$u = -0.519171 + 0.612965I$	$4.23043 - 0.69017I$	$8.91098 - 0.24136I$
$u = -0.519171 - 0.612965I$	$4.23043 + 0.69017I$	$8.91098 + 0.24136I$
$u = -1.164900 + 0.276437I$	$-7.38303 - 2.10122I$	0
$u = -1.164900 - 0.276437I$	$-7.38303 + 2.10122I$	0
$u = \quad 0.249372 + 0.759552I$	$-3.37040 + 2.27685I$	$2.08581 - 2.28652I$
$u = \quad 0.249372 - 0.759552I$	$-3.37040 - 2.27685I$	$2.08581 + 2.28652I$
$u = -1.164180 + 0.297688I$	$-7.64026 + 0.98754I$	0
$u = -1.164180 - 0.297688I$	$-7.64026 - 0.98754I$	0
$u = \quad 1.170650 + 0.272859I$	$-8.91819 + 7.58864I$	0
$u = \quad 1.170650 - 0.272859I$	$-8.91819 - 7.58864I$	0
$u = \quad 1.173220 + 0.286979I$	$-13.27670 + 0.66412I$	0
$u = \quad 1.173220 - 0.286979I$	$-13.27670 - 0.66412I$	0
$u = \quad 1.171100 + 0.302065I$	$-9.27591 - 6.32389I$	0
$u = \quad 1.171100 - 0.302065I$	$-9.27591 + 6.32389I$	0
$u = \quad 0.367617 + 0.693910I$	$3.06846 + 6.42905I$	$5.74931 - 6.97675I$
$u = \quad 0.367617 - 0.693910I$	$3.06846 - 6.42905I$	$5.74931 + 6.97675I$
$u = -1.085380 + 0.549352I$	$1.61197 + 5.79661I$	0
$u = -1.085380 - 0.549352I$	$1.61197 - 5.79661I$	0
$u = -0.383920 + 0.675789I$	$3.65049 - 1.05201I$	$7.59735 + 1.19575I$
$u = -0.383920 - 0.675789I$	$3.65049 + 1.05201I$	$7.59735 - 1.19575I$
$u = \quad 1.107480 + 0.519195I$	$-3.96203 - 6.81758I$	0
$u = \quad 1.107480 - 0.519195I$	$-3.96203 + 6.81758I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.094630 + 0.552876I$	$0.95490 - 11.22700I$	0
$u = 1.094630 - 0.552876I$	$0.95490 + 11.22700I$	0
$u = 0.616209 + 0.411830I$	$-0.52415 - 1.55757I$	$-0.03671 + 5.81499I$
$u = 0.616209 - 0.411830I$	$-0.52415 + 1.55757I$	$-0.03671 - 5.81499I$
$u = 1.147140 + 0.540994I$	$-5.98702 - 7.15179I$	0
$u = 1.147140 - 0.540994I$	$-5.98702 + 7.15179I$	0
$u = -1.152090 + 0.538667I$	$-7.66641 + 1.89692I$	0
$u = -1.152090 - 0.538667I$	$-7.66641 - 1.89692I$	0
$u = 1.146000 + 0.553071I$	$-5.50832 - 10.23230I$	0
$u = 1.146000 - 0.553071I$	$-5.50832 + 10.23230I$	0
$u = -1.151650 + 0.548129I$	$-11.5016 + 8.8913I$	0
$u = -1.151650 - 0.548129I$	$-11.5016 - 8.8913I$	0
$u = -1.148500 + 0.555482I$	$-7.0021 + 15.7722I$	0
$u = -1.148500 - 0.555482I$	$-7.0021 - 15.7722I$	0
$u = 0.275856 + 0.642568I$	$-1.60956 + 2.29309I$	$-2.09430 - 4.60338I$
$u = 0.275856 - 0.642568I$	$-1.60956 - 2.29309I$	$-2.09430 + 4.60338I$
$u = -0.387189 + 0.554390I$	$1.139690 - 0.526971I$	$8.40078 + 1.81328I$
$u = -0.387189 - 0.554390I$	$1.139690 + 0.526971I$	$8.40078 - 1.81328I$
$u = 0.067865 + 0.548015I$	$0.15131 - 2.22893I$	$0.09814 + 3.20079I$
$u = 0.067865 - 0.548015I$	$0.15131 + 2.22893I$	$0.09814 - 3.20079I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{80} + 29u^{79} + \cdots - 8u^2 + 1$
c_2, c_6	$u^{80} - u^{79} + \cdots - 4u^3 + 1$
c_3	$u^{80} + u^{79} + \cdots + 256u + 97$
c_4, c_{10}	$u^{80} - u^{79} + \cdots + 2u^4 + 1$
c_7, c_8, c_{12}	$u^{80} + 5u^{79} + \cdots + 24u + 1$
c_9	$u^{80} + 39u^{79} + \cdots + 4u^2 + 1$
c_{11}	$u^{80} - 3u^{79} + \cdots + 800u + 851$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{80} + 45y^{79} + \cdots - 16y + 1$
c_2, c_6	$y^{80} + 29y^{79} + \cdots - 8y^2 + 1$
c_3	$y^{80} + 9y^{79} + \cdots + 10512y + 9409$
c_4, c_{10}	$y^{80} - 39y^{79} + \cdots + 4y^2 + 1$
c_7, c_8, c_{12}	$y^{80} + 81y^{79} + \cdots + 8y + 1$
c_9	$y^{80} + 5y^{79} + \cdots + 8y + 1$
c_{11}	$y^{80} + 29y^{79} + \cdots + 19021504y + 724201$