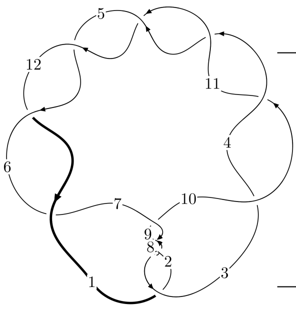
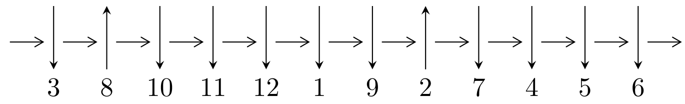
$12a_{0762}$ $(K12a_{0762})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{25} - u^{24} + \cdots - u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 25 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. $I_1^u = \langle u^{25} - u^{24} + \cdots - u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{11} - 2u^9 - 4u^7 - 4u^5 - 3u^3 \\ -u^{11} - u^9 - 2u^7 - u^5 + u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{18} - 3u^{16} - 8u^{14} - 13u^{12} - 17u^{10} - 15u^8 - 10u^6 - 2u^4 + u^2 + 1 \\ -u^{18} - 2u^{16} - 5u^{14} - 6u^{12} - 5u^{10} - 2u^8 + 2u^6 + 4u^4 + u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{10} - u^8 - 2u^6 - u^4 + u^2 + 1 \\ -u^{12} - 2u^{10} - 4u^8 - 4u^6 - 3u^4 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^{17} - 2u^{15} - 5u^{13} - 6u^{11} - 5u^9 - 2u^7 + 2u^5 + 4u^3 + u \\ -u^{19} - 3u^{17} - 8u^{15} - 13u^{13} - 17u^{11} - 15u^9 - 10u^7 - 2u^5 + u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{24} + 3u^{22} + \cdots - 7u^4 + 1 \\ u^{24} - u^{23} + \cdots + 2u + 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= 4u^{24} + 12u^{22} + 4u^{21} + 40u^{20} + 12u^{19} + 76u^{18} + 36u^{17} + 132u^{16} + 68u^{15} + 168u^{14} + 104u^{13} + 184u^{12} + 128u^{11} + 144u^{10} + 116u^9 + 96u^8 + 76u^7 + 24u^6 + 32u^5 - 8u^3 - 12u^2 - 12u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7, c_9	$u^{25} + 7u^{24} + \cdots + u - 1$
c_2, c_8	$u^{25} - u^{24} + \cdots - u - 1$
c_3, c_4, c_5 c_6, c_{10}, c_{11} c_{12}	$u^{25} - u^{24} + \cdots - 3u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7, c_9	$y^{25} + 23y^{24} + \cdots + 53y - 1$
c_2, c_8	$y^{25} + 7y^{24} + \cdots + y - 1$
c_3, c_4, c_5 c_6, c_{10}, c_{11} c_{12}	$y^{25} - 37y^{24} + \cdots + y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.265781 + 0.997248I$	$-10.12290 + 2.99473I$	$-17.9259 - 4.0117I$
$u = 0.265781 - 0.997248I$	$-10.12290 - 2.99473I$	$-17.9259 + 4.0117I$
$u = -0.273882 + 1.054670I$	$17.4097 - 3.3423I$	$-17.7803 + 3.3269I$
$u = -0.273882 - 1.054670I$	$17.4097 + 3.3423I$	$-17.7803 - 3.3269I$
$u = -0.246006 + 0.873993I$	$-3.15716 - 2.26268I$	$-17.3905 + 6.2101I$
$u = -0.246006 - 0.873993I$	$-3.15716 + 2.26268I$	$-17.3905 - 6.2101I$
$u = -0.830816 + 0.777643I$	$-3.05026 + 1.70594I$	$-11.67057 - 0.75196I$
$u = -0.830816 - 0.777643I$	$-3.05026 - 1.70594I$	$-11.67057 + 0.75196I$
$u = 0.865156 + 0.751311I$	$-14.5343 - 2.5689I$	$-11.95129 + 0.13381I$
$u = 0.865156 - 0.751311I$	$-14.5343 + 2.5689I$	$-11.95129 - 0.13381I$
$u = 0.799748 + 0.834653I$	$3.10996 + 0.09524I$	$-9.28181 + 2.24962I$
$u = 0.799748 - 0.834653I$	$3.10996 - 0.09524I$	$-9.28181 - 2.24962I$
$u = -0.789348 + 0.887317I$	$4.84212 - 2.96582I$	$-4.58372 + 3.07678I$
$u = -0.789348 - 0.887317I$	$4.84212 + 2.96582I$	$-4.58372 - 3.07678I$
$u = 0.775933 + 0.933111I$	$2.80794 + 5.82631I$	$-10.19251 - 7.46016I$
$u = 0.775933 - 0.933111I$	$2.80794 - 5.82631I$	$-10.19251 + 7.46016I$
$u = -0.771220 + 0.977956I$	$-3.66358 - 7.69842I$	$-12.72418 + 5.77785I$
$u = -0.771220 - 0.977956I$	$-3.66358 + 7.69842I$	$-12.72418 - 5.77785I$
$u = 0.774392 + 1.005890I$	$-15.3222 + 8.6670I$	$-13.19072 - 4.94641I$
$u = 0.774392 - 1.005890I$	$-15.3222 - 8.6670I$	$-13.19072 + 4.94641I$
$u = -0.728653$	-18.6276	-11.9440
$u = 0.172656 + 0.645298I$	$-0.420243 + 0.852863I$	$-9.01002 - 7.64857I$
$u = 0.172656 - 0.645298I$	$-0.420243 - 0.852863I$	$-9.01002 + 7.64857I$
$u = 0.636642$	-7.02137	-11.7190
$u = -0.392781$	-0.881262	-10.9350

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7, c_9	$u^{25} + 7u^{24} + \cdots + u - 1$
c_2, c_8	$u^{25} - u^{24} + \cdots - u - 1$
c_3, c_4, c_5 c_6, c_{10}, c_{11} c_{12}	$u^{25} - u^{24} + \cdots - 3u - 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7, c_9	$y^{25} + 23y^{24} + \cdots + 53y - 1$
c_2, c_8	$y^{25} + 7y^{24} + \cdots + y - 1$
c_3, c_4, c_5 c_6, c_{10}, c_{11} c_{12}	$y^{25} - 37y^{24} + \cdots + y - 1$