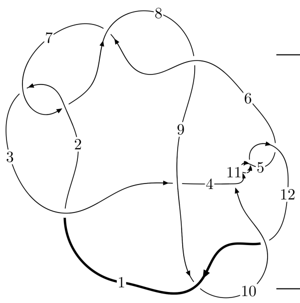
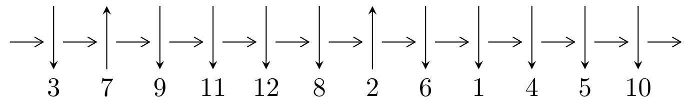
$12a_{0600}$ ($K12a_{0600}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{54} + u^{53} + \cdots - u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 54 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. $I^u_1 = \langle u^{54} + u^{53} + \cdots - u - 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{11} - 2u^9 - 4u^7 - 4u^5 - 3u^3 \\ -u^{11} - u^9 - 2u^7 - u^5 + u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{12} + u^{10} + 3u^8 + 2u^6 + 2u^4 + u^2 + 1 \\ u^{14} + 2u^{12} + 5u^{10} + 6u^8 + 6u^6 + 4u^4 + u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{36} - 5u^{34} + \cdots + u^2 + 1 \\ -u^{36} - 4u^{34} + \cdots + 7u^4 + 2u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^{21} + 2u^{19} + \cdots + 4u^3 + u \\ u^{23} + 3u^{21} + \cdots + 2u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{46} - 5u^{44} + \cdots - 6u^4 + 1 \\ -u^{48} - 6u^{46} + \cdots - 16u^6 - 4u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{52} + 4u^{51} + \cdots - 4u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_8	$u^{54} + 13u^{53} + \cdots - u + 1$
c_2, c_7	$u^{54} + u^{53} + \cdots - u - 1$
c_3	$u^{54} + u^{53} + \cdots - 947u - 457$
c_4, c_5, c_{10} c_{11}	$u^{54} - u^{53} + \cdots - 3u - 1$
c_9, c_{12}	$u^{54} - 9u^{53} + \cdots + 607u - 89$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_8	$y^{54} + 57y^{53} + \cdots - 45y + 1$
c_2, c_7	$y^{54} + 13y^{53} + \cdots - y + 1$
c_3	$y^{54} + 17y^{53} + \cdots + 468707y + 208849$
c_4, c_5, c_{10} c_{11}	$y^{54} - 59y^{53} + \cdots - y + 1$
c_9, c_{12}	$y^{54} + 37y^{53} + \cdots + 87587y + 7921$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.421756 + 0.905386I$	$1.46770 + 2.75588I$	$-6.58826 - 3.20175I$
$u = 0.421756 - 0.905386I$	$1.46770 - 2.75588I$	$-6.58826 + 3.20175I$
$u = -0.472307 + 0.861794I$	$-4.61385 - 0.50041I$	$-9.83076 + 3.29327I$
$u = -0.472307 - 0.861794I$	$-4.61385 + 0.50041I$	$-9.83076 - 3.29327I$
$u = 0.266117 + 0.940879I$	$-10.82780 + 2.68050I$	$-17.4218 - 4.4521I$
$u = 0.266117 - 0.940879I$	$-10.82780 - 2.68050I$	$-17.4218 + 4.4521I$
$u = -0.407861 + 0.938268I$	$0.96567 - 6.61313I$	$-8.59494 + 9.79780I$
$u = -0.407861 - 0.938268I$	$0.96567 + 6.61313I$	$-8.59494 - 9.79780I$
$u = 0.399116 + 0.961261I$	$-6.09084 + 9.22771I$	$-12.2957 - 8.4163I$
$u = 0.399116 - 0.961261I$	$-6.09084 - 9.22771I$	$-12.2957 + 8.4163I$
$u = 0.090589 + 0.936330I$	$-7.81225 - 3.84764I$	$-15.8715 + 2.0065I$
$u = 0.090589 - 0.936330I$	$-7.81225 + 3.84764I$	$-15.8715 - 2.0065I$
$u = -0.276477 + 0.881238I$	$-3.10584 - 2.34442I$	$-16.9541 + 6.0409I$
$u = -0.276477 - 0.881238I$	$-3.10584 + 2.34442I$	$-16.9541 - 6.0409I$
$u = -0.062430 + 0.882605I$	$-0.88339 + 1.63649I$	$-12.53411 - 3.84361I$
$u = -0.062430 - 0.882605I$	$-0.88339 - 1.63649I$	$-12.53411 + 3.84361I$
$u = -0.802323 + 0.832262I$	$-4.20575 + 0.66399I$	$-10.65156 + 0.I$
$u = -0.802323 - 0.832262I$	$-4.20575 - 0.66399I$	$-10.65156 + 0.I$
$u = 0.818373 + 0.865309I$	$3.46423 + 0.45809I$	$-8.00000 + 0.I$
$u = 0.818373 - 0.865309I$	$3.46423 - 0.45809I$	$-8.00000 + 0.I$
$u = -0.823200 + 0.900365I$	$5.63050 - 3.07356I$	0
$u = -0.823200 - 0.900365I$	$5.63050 + 3.07356I$	0
$u = -0.886232 + 0.838665I$	$2.20397 + 6.81927I$	0
$u = -0.886232 - 0.838665I$	$2.20397 - 6.81927I$	0
$u = -0.782939 + 0.941062I$	$-4.53436 - 6.62284I$	0
$u = -0.782939 - 0.941062I$	$-4.53436 + 6.62284I$	0
$u = 0.883660 + 0.847398I$	$9.22964 - 3.95082I$	0
$u = 0.883660 - 0.847398I$	$9.22964 + 3.95082I$	0
$u = 0.803804 + 0.926221I$	$3.27760 + 5.61427I$	0
$u = 0.803804 - 0.926221I$	$3.27760 - 5.61427I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.880738 + 0.857162I$	$9.69162 - 0.23278I$	0
$u = -0.880738 - 0.857162I$	$9.69162 + 0.23278I$	0
$u = 0.878437 + 0.871151I$	$3.67628 + 3.01982I$	0
$u = 0.878437 - 0.871151I$	$3.67628 - 3.01982I$	0
$u = -0.610477 + 0.439255I$	$-3.29528 - 3.49644I$	$-6.18778 + 3.39542I$
$u = -0.610477 - 0.439255I$	$-3.29528 + 3.49644I$	$-6.18778 - 3.39542I$
$u = 0.229939 + 0.699250I$	$-0.424354 + 1.032670I$	$-6.76973 - 6.18966I$
$u = 0.229939 - 0.699250I$	$-0.424354 - 1.032670I$	$-6.76973 + 6.18966I$
$u = 0.844032 + 0.951939I$	$3.41989 + 3.36125I$	0
$u = 0.844032 - 0.951939I$	$3.41989 - 3.36125I$	0
$u = -0.836819 + 0.962125I$	$9.35926 - 6.13178I$	0
$u = -0.836819 - 0.962125I$	$9.35926 + 6.13178I$	0
$u = 0.832840 + 0.969452I$	$8.84361 + 10.31070I$	0
$u = 0.832840 - 0.969452I$	$8.84361 - 10.31070I$	0
$u = -0.829260 + 0.975631I$	$1.77109 - 13.17440I$	0
$u = -0.829260 - 0.975631I$	$1.77109 + 13.17440I$	0
$u = 0.596016 + 0.373336I$	$3.12910 + 1.02645I$	$-2.02831 - 3.48790I$
$u = 0.596016 - 0.373336I$	$3.12910 - 1.02645I$	$-2.02831 + 3.48790I$
$u = 0.635066 + 0.277401I$	$-3.94406 - 5.44870I$	$-6.82965 + 3.24384I$
$u = 0.635066 - 0.277401I$	$-3.94406 + 5.44870I$	$-6.82965 - 3.24384I$
$u = -0.610761 + 0.317401I$	$2.90528 + 2.85235I$	$-2.90911 - 4.01001I$
$u = -0.610761 - 0.317401I$	$2.90528 - 2.85235I$	$-2.90911 + 4.01001I$
$u = 0.540222$	-8.09120	-10.3100
$u = -0.376064$	-0.895266	-10.7040

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6, c_8	$u^{54} + 13u^{53} + \cdots - u + 1$
c_2, c_7	$u^{54} + u^{53} + \cdots - u - 1$
c_3	$u^{54} + u^{53} + \cdots - 947u - 457$
c_4, c_5, c_{10} c_{11}	$u^{54} - u^{53} + \cdots - 3u - 1$
c_9, c_{12}	$u^{54} - 9u^{53} + \cdots + 607u - 89$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_8	$y^{54} + 57y^{53} + \cdots - 45y + 1$
c_2, c_7	$y^{54} + 13y^{53} + \cdots - y + 1$
c_3	$y^{54} + 17y^{53} + \cdots + 468707y + 208849$
c_4, c_5, c_{10} c_{11}	$y^{54} - 59y^{53} + \cdots - y + 1$
c_9, c_{12}	$y^{54} + 37y^{53} + \cdots + 87587y + 7921$