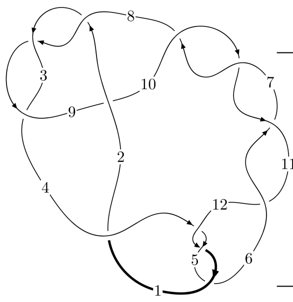
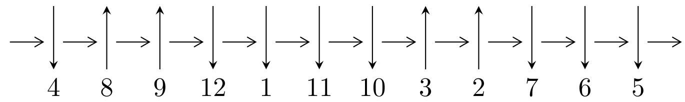
$12a_{1148}$ $(K12a_{1148})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{36} + u^{35} + \cdots + 3u^2 + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 36 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. $I_1^u = \langle u^{36} + u^{35} + \cdots + 3u^2 + 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^5 + 2u^3 - u \\ u^7 - 3u^5 + 2u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^3 + 2u \\ -u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^6 - 3u^4 + 2u^2 + 1 \\ u^6 - 2u^4 + u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^9 + 4u^7 - 5u^5 + 3u \\ -u^9 + 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{12} - 5u^{10} + 9u^8 - 4u^6 - 6u^4 + 5u^2 + 1 \\ u^{12} - 4u^{10} + 6u^8 - 2u^6 - 3u^4 + 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{21} - 8u^{19} + \cdots - 4u^3 + 3u \\ -u^{23} + 9u^{21} + \cdots + 4u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{31} - 12u^{29} + \cdots + 32u^5 + 16u^3 \\ u^{31} - 11u^{29} + \cdots + 4u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{33} - 48u^{31} + 4u^{30} + 260u^{29} - 44u^{28} - 804u^{27} + 216u^{26} + 1444u^{25} - 592u^{24} - 1136u^{23} + 892u^{22} - 948u^{21} - 420u^{20} + 3268u^{19} - 948u^{18} - 2672u^{17} + 1812u^{16} - 804u^{15} - 808u^{14} + 2816u^{13} - 896u^{12} - 1200u^{11} + 1080u^{10} - 816u^9 - 56u^8 + 680u^7 - 352u^6 + 80u^5 + 64u^4 - 112u^3 + 48u^2 - 12u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_7 c_{10}, c_{11}	$u^{36} - 3u^{35} + \cdots - 12u + 1$
c_2, c_3, c_8	$u^{36} - u^{35} + \cdots + 3u^2 + 1$
c_4, c_5, c_{12}	$u^{36} + u^{35} + \cdots + 3u^2 + 1$
c_9	$u^{36} + 3u^{35} + \cdots - 106u - 187$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_7 c_{10}, c_{11}	$y^{36} + 49y^{35} + \cdots - 54y + 1$
c_2, c_3, c_8	$y^{36} - 35y^{35} + \cdots + 6y + 1$
c_4, c_5, c_{12}	$y^{36} - 27y^{35} + \cdots + 6y + 1$
c_9	$y^{36} - 23y^{35} + \cdots - 458166y + 34969$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.015238 + 0.941216I$	$-18.6813 - 5.7665I$	$5.67878 + 2.82103I$
$u = 0.015238 - 0.941216I$	$-18.6813 + 5.7665I$	$5.67878 - 2.82103I$
$u = -0.006373 + 0.933067I$	$14.2459 + 2.3310I$	$2.48067 - 2.82015I$
$u = -0.006373 - 0.933067I$	$14.2459 - 2.3310I$	$2.48067 + 2.82015I$
$u = 0.922444$	3.24298	1.81830
$u = -1.15188$	-2.33631	-1.84880
$u = 1.159790 + 0.356655I$	$6.79135 + 0.54642I$	$2.47249 + 0.25591I$
$u = 1.159790 - 0.356655I$	$6.79135 - 0.54642I$	$2.47249 - 0.25591I$
$u = -1.189470 + 0.302752I$	$0.62502 + 1.83607I$	$-1.241747 - 0.124519I$
$u = -1.189470 - 0.302752I$	$0.62502 - 1.83607I$	$-1.241747 + 0.124519I$
$u = 0.076636 + 0.760003I$	$10.05780 - 4.59251I$	$5.76656 + 3.95694I$
$u = 0.076636 - 0.760003I$	$10.05780 + 4.59251I$	$5.76656 - 3.95694I$
$u = 1.243450 + 0.096073I$	$-4.28530 - 2.08913I$	$-10.75982 + 5.46611I$
$u = 1.243450 - 0.096073I$	$-4.28530 + 2.08913I$	$-10.75982 - 5.46611I$
$u = -1.26918$	-1.54627	-6.99460
$u = -1.270690 + 0.154646I$	$0.15355 + 4.66558I$	$-3.82180 - 6.53875I$
$u = -1.270690 - 0.154646I$	$0.15355 - 4.66558I$	$-3.82180 + 6.53875I$
$u = 1.247480 + 0.302288I$	$0.14493 - 5.48066I$	$-3.17694 + 7.52248I$
$u = 1.247480 - 0.302288I$	$0.14493 + 5.48066I$	$-3.17694 - 7.52248I$
$u = -0.039504 + 0.709770I$	$4.09074 + 1.83671I$	$2.53145 - 4.21112I$
$u = -0.039504 - 0.709770I$	$4.09074 - 1.83671I$	$2.53145 + 4.21112I$
$u = -1.276970 + 0.326508I$	$5.86790 + 8.48401I$	$0.72483 - 6.94207I$
$u = -1.276970 - 0.326508I$	$5.86790 - 8.48401I$	$0.72483 + 6.94207I$
$u = 1.284000 + 0.467539I$	$16.8633 + 0.7482I$	$2.56178 + 0.I$
$u = 1.284000 - 0.467539I$	$16.8633 - 0.7482I$	$2.56178 + 0.I$
$u = -1.287770 + 0.457688I$	$10.26840 + 2.62753I$	$-6 - 0.715837 + 0.10I$
$u = -1.287770 - 0.457688I$	$10.26840 - 2.62753I$	$-6 - 0.715837 + 0.10I$
$u = 1.297400 + 0.453300I$	$10.19290 - 7.27614I$	$-0.92056 + 5.70911I$
$u = 1.297400 - 0.453300I$	$10.19290 + 7.27614I$	$-0.92056 - 5.70911I$
$u = -1.306430 + 0.456024I$	$16.6842 + 10.7492I$	$2.30008 - 5.64057I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.306430 - 0.456024I$	$16.6842 - 10.7492I$	$2.30008 + 5.64057I$
$u = \quad 0.238535 + 0.469959I$	$4.68915 - 2.52273I$	$3.50908 + 6.03596I$
$u = \quad 0.238535 - 0.469959I$	$4.68915 + 2.52273I$	$3.50908 - 6.03596I$
$u = \quad 0.506828$	3.35647	-1.00240
$u = -0.189419 + 0.278541I$	$-0.110112 + 0.754221I$	$-3.37527 - 9.18102I$
$u = -0.189419 - 0.278541I$	$-0.110112 - 0.754221I$	$-3.37527 + 9.18102I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6, c_7 c_{10}, c_{11}	$u^{36} - 3u^{35} + \cdots - 12u + 1$
c_2, c_3, c_8	$u^{36} - u^{35} + \cdots + 3u^2 + 1$
c_4, c_5, c_{12}	$u^{36} + u^{35} + \cdots + 3u^2 + 1$
c_9	$u^{36} + 3u^{35} + \cdots - 106u - 187$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_7 c_{10}, c_{11}	$y^{36} + 49y^{35} + \cdots - 54y + 1$
c_2, c_3, c_8	$y^{36} - 35y^{35} + \cdots + 6y + 1$
c_4, c_5, c_{12}	$y^{36} - 27y^{35} + \cdots + 6y + 1$
c_9	$y^{36} - 23y^{35} + \cdots - 458166y + 34969$