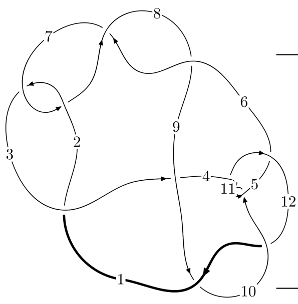
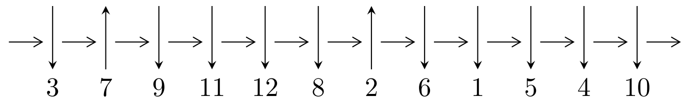
$12a_{0601}$ ($K12a_{0601}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{63} + u^{62} + \cdots + 4u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 63 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. $I_1^u = \langle u^{63} + u^{62} + \cdots + 4u + 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^4 - u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^8 + 3u^6 + u^4 - 2u^2 + 1 \\ -u^8 - 4u^6 - 4u^4 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{19} + 8u^{17} + 24u^{15} + 30u^{13} + 7u^{11} - 10u^9 + 4u^7 + 6u^5 - 3u^3 + 2u \\ -u^{19} - 9u^{17} - 32u^{15} - 55u^{13} - 43u^{11} - 9u^9 - 4u^5 + u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{34} - 15u^{32} + \cdots + u^2 + 1 \\ u^{34} + 16u^{32} + \cdots - 2u^4 + 3u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{20} - 9u^{18} + \cdots - u^2 + 1 \\ -u^{22} - 10u^{20} + \cdots + 2u^4 - u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{35} - 16u^{33} + \cdots + 3u^3 - 2u \\ -u^{37} - 17u^{35} + \cdots - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{62} - 4u^{61} + \cdots - 40u - 18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_8	$u^{63} + 15u^{62} + \cdots + 16u^2 - 1$
c_2, c_7	$u^{63} + u^{62} + \cdots + 2u^3 + 1$
c_3	$u^{63} + u^{62} + \cdots + 11678u + 2941$
c_4, c_{10}, c_{11}	$u^{63} + u^{62} + \cdots + 4u + 1$
c_5	$u^{63} - u^{62} + \cdots + 394u + 65$
c_9, c_{12}	$u^{63} - 9u^{62} + \cdots + 16u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_8	$y^{63} + 67y^{62} + \cdots + 32y - 1$
c_2, c_7	$y^{63} + 15y^{62} + \cdots + 16y^2 - 1$
c_3	$y^{63} + 27y^{62} + \cdots - 133314016y - 8649481$
c_4, c_{10}, c_{11}	$y^{63} + 59y^{62} + \cdots - 16y^2 - 1$
c_5	$y^{63} + 23y^{62} + \cdots - 226184y - 4225$
c_9, c_{12}	$y^{63} + 55y^{62} + \cdots + 208y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.026966 + 1.106350I$	$5.72389 + 2.98502I$	0
$u = 0.026966 - 1.106350I$	$5.72389 - 2.98502I$	0
$u = -0.687201 + 0.412506I$	$9.24727 + 10.49800I$	$-3.51356 - 8.27768I$
$u = -0.687201 - 0.412506I$	$9.24727 - 10.49800I$	$-3.51356 + 8.27768I$
$u = 0.683558 + 0.418042I$	$9.63540 - 4.12275I$	$-2.71858 + 3.42597I$
$u = 0.683558 - 0.418042I$	$9.63540 + 4.12275I$	$-2.71858 - 3.42597I$
$u = 0.594200 + 0.519837I$	$10.03370 - 0.13330I$	$-1.68361 + 2.69330I$
$u = 0.594200 - 0.519837I$	$10.03370 + 0.13330I$	$-1.68361 - 2.69330I$
$u = -0.587406 + 0.526285I$	$9.69166 - 6.24596I$	$-2.31699 + 2.22181I$
$u = -0.587406 - 0.526285I$	$9.69166 + 6.24596I$	$-2.31699 - 2.22181I$
$u = 0.132381 + 1.218840I$	$0.146145 - 0.270553I$	0
$u = 0.132381 - 1.218840I$	$0.146145 + 0.270553I$	0
$u = -0.657132 + 0.390763I$	$1.28852 + 6.79003I$	$-7.72888 - 9.43258I$
$u = -0.657132 - 0.390763I$	$1.28852 - 6.79003I$	$-7.72888 + 9.43258I$
$u = 0.636380 + 0.414397I$	$3.22883 - 2.96613I$	$-2.26029 + 3.71050I$
$u = 0.636380 - 0.414397I$	$3.22883 + 2.96613I$	$-2.26029 - 3.71050I$
$u = 0.588036 + 0.455040I$	$3.42044 - 1.03125I$	$-1.58884 + 3.34604I$
$u = 0.588036 - 0.455040I$	$3.42044 + 1.03125I$	$-1.58884 - 3.34604I$
$u = -0.546794 + 0.481840I$	$1.71497 - 2.81621I$	$-6.17352 + 3.05233I$
$u = -0.546794 - 0.481840I$	$1.71497 + 2.81621I$	$-6.17352 - 3.05233I$
$u = 0.187128 + 1.267970I$	$0.75597 - 5.28066I$	0
$u = 0.187128 - 1.267970I$	$0.75597 + 5.28066I$	0
$u = -0.140950 + 1.288190I$	$3.01462 + 2.29987I$	0
$u = -0.140950 - 1.288190I$	$3.01462 - 2.29987I$	0
$u = -0.588233 + 0.366746I$	$-0.67695 + 1.75613I$	$-11.70628 - 3.56374I$
$u = -0.588233 - 0.366746I$	$-0.67695 - 1.75613I$	$-11.70628 + 3.56374I$
$u = 0.225134 + 1.306650I$	$7.62130 - 8.96120I$	0
$u = 0.225134 - 1.306650I$	$7.62130 + 8.96120I$	0
$u = -0.219260 + 1.317800I$	$7.95062 + 2.83007I$	0
$u = -0.219260 - 1.317800I$	$7.95062 - 2.83007I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.042411 + 1.342580I$	$4.52694 + 1.80324I$	0
$u = -0.042411 - 1.342580I$	$4.52694 - 1.80324I$	0
$u = 0.636351 + 0.129886I$	$3.15162 - 5.83269I$	$-8.95633 + 6.72916I$
$u = 0.636351 - 0.129886I$	$3.15162 + 5.83269I$	$-8.95633 - 6.72916I$
$u = -0.626388 + 0.148778I$	$3.37667 - 0.23757I$	$-8.27194 - 1.71639I$
$u = -0.626388 - 0.148778I$	$3.37667 + 0.23757I$	$-8.27194 + 1.71639I$
$u = -0.032534 + 0.631203I$	$5.53486 + 3.05897I$	$-2.47533 - 2.85146I$
$u = -0.032534 - 0.631203I$	$5.53486 - 3.05897I$	$-2.47533 + 2.85146I$
$u = 0.598759 + 0.047938I$	$-3.27254 - 2.41607I$	$-16.1850 + 5.7225I$
$u = 0.598759 - 0.047938I$	$-3.27254 + 2.41607I$	$-16.1850 - 5.7225I$
$u = -0.00543 + 1.42179I$	$11.72350 + 3.15804I$	0
$u = -0.00543 - 1.42179I$	$11.72350 - 3.15804I$	0
$u = -0.22566 + 1.44348I$	$5.15010 + 4.76868I$	0
$u = -0.22566 - 1.44348I$	$5.15010 - 4.76868I$	0
$u = -0.19753 + 1.46126I$	$7.93304 - 0.09783I$	0
$u = -0.19753 - 1.46126I$	$7.93304 + 0.09783I$	0
$u = -0.24532 + 1.45554I$	$7.23183 + 10.09140I$	0
$u = -0.24532 - 1.45554I$	$7.23183 - 10.09140I$	0
$u = 0.23532 + 1.46098I$	$9.26906 - 6.15955I$	0
$u = 0.23532 - 1.46098I$	$9.26906 + 6.15955I$	0
$u = 0.21343 + 1.46486I$	$9.59495 - 3.96752I$	0
$u = 0.21343 - 1.46486I$	$9.59495 + 3.96752I$	0
$u = -0.25415 + 1.46773I$	$15.3101 + 13.9353I$	0
$u = -0.25415 - 1.46773I$	$15.3101 - 13.9353I$	0
$u = 0.25182 + 1.46931I$	$15.7234 - 7.5385I$	0
$u = 0.25182 - 1.46931I$	$15.7234 + 7.5385I$	0
$u = -0.19538 + 1.48477I$	$16.1933 - 3.4257I$	0
$u = -0.19538 - 1.48477I$	$16.1933 + 3.4257I$	0
$u = 0.19915 + 1.48476I$	$16.5161 - 2.9974I$	0
$u = 0.19915 - 1.48476I$	$16.5161 + 2.9974I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.501335$	-0.970575	-9.91400
$u = -0.206160 + 0.325864I$	$-0.414743 + 1.014940I$	$-6.73202 - 6.39068I$
$u = -0.206160 - 0.325864I$	$-0.414743 - 1.014940I$	$-6.73202 + 6.39068I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6, c_8	$u^{63} + 15u^{62} + \cdots + 16u^2 - 1$
c_2, c_7	$u^{63} + u^{62} + \cdots + 2u^3 + 1$
c_3	$u^{63} + u^{62} + \cdots + 11678u + 2941$
c_4, c_{10}, c_{11}	$u^{63} + u^{62} + \cdots + 4u + 1$
c_5	$u^{63} - u^{62} + \cdots + 394u + 65$
c_9, c_{12}	$u^{63} - 9u^{62} + \cdots + 16u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_8	$y^{63} + 67y^{62} + \cdots + 32y - 1$
c_2, c_7	$y^{63} + 15y^{62} + \cdots + 16y^2 - 1$
c_3	$y^{63} + 27y^{62} + \cdots - 133314016y - 8649481$
c_4, c_{10}, c_{11}	$y^{63} + 59y^{62} + \cdots - 16y^2 - 1$
c_5	$y^{63} + 23y^{62} + \cdots - 226184y - 4225$
c_9, c_{12}	$y^{63} + 55y^{62} + \cdots + 208y - 1$