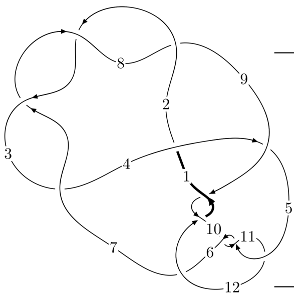
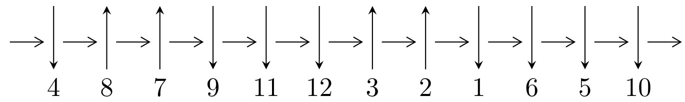
$12a_{1126}$ $(K12a_{1126})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{59} - u^{58} + \cdots - 2u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 59 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. $I_1^u = \langle u^{59} - u^{58} + \cdots - 2u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 + 2u \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^8 + 5u^6 + 7u^4 + 2u^2 + 1 \\ u^8 + 4u^6 + 4u^4 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^4 + 3u^2 + 1 \\ -u^6 - 2u^4 + u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{13} - 8u^{11} - 23u^9 - 28u^7 - 14u^5 - 4u^3 + u \\ u^{15} + 7u^{13} + 16u^{11} + 11u^9 - 2u^7 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^{22} + 13u^{20} + \cdots + 2u^2 + 1 \\ -u^{24} - 12u^{22} + \cdots - 8u^6 - 4u^4 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{45} + 26u^{43} + \cdots + 4u^3 + u \\ -u^{47} - 25u^{45} + \cdots - 4u^5 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{40} - 23u^{38} + \cdots + 2u^2 + 1 \\ -u^{40} - 22u^{38} + \cdots - 8u^6 - 4u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{58} + 4u^{57} + \cdots - 12u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{59} - 15u^{58} + \cdots + 16u - 1$
c_2, c_3, c_7 c_8	$u^{59} - u^{58} + \cdots - 2u + 1$
c_4	$u^{59} - u^{58} + \cdots - 60u + 29$
c_5, c_{10}, c_{11}	$u^{59} - u^{58} + \cdots + u^2 + 1$
c_6	$u^{59} + u^{58} + \cdots - 32u + 185$
c_9, c_{12}	$u^{59} - 9u^{58} + \cdots - 312u + 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{59} - y^{58} + \cdots - 66y - 1$
c_2, c_3, c_7 c_8	$y^{59} + 67y^{58} + \cdots - 2y - 1$
c_4	$y^{59} - 9y^{58} + \cdots + 8762y - 841$
c_5, c_{10}, c_{11}	$y^{59} + 55y^{58} + \cdots - 2y - 1$
c_6	$y^{59} + 19y^{58} + \cdots - 707526y - 34225$
c_9, c_{12}	$y^{59} + 47y^{58} + \cdots - 338y - 289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.087204 + 0.851478I$	$5.17243 - 4.73662I$	$-4.00000 + 2.76071I$
$u = 0.087204 - 0.851478I$	$5.17243 + 4.73662I$	$-4.00000 - 2.76071I$
$u = 0.522294 + 0.671217I$	$7.75645 + 10.78740I$	$-0.55320 - 8.84457I$
$u = 0.522294 - 0.671217I$	$7.75645 - 10.78740I$	$-0.55320 + 8.84457I$
$u = -0.509216 + 0.664867I$	$1.80756 - 7.41238I$	$-4.27230 + 9.26004I$
$u = -0.509216 - 0.664867I$	$1.80756 + 7.41238I$	$-4.27230 - 9.26004I$
$u = -0.522330 + 0.627830I$	$8.64971 - 0.66019I$	$1.00927 + 3.06229I$
$u = -0.522330 - 0.627830I$	$8.64971 + 0.66019I$	$1.00927 - 3.06229I$
$u = 0.502304 + 0.642574I$	$2.30495 + 3.34683I$	$-2.71079 - 3.11364I$
$u = 0.502304 - 0.642574I$	$2.30495 - 3.34683I$	$-2.71079 + 3.11364I$
$u = 0.423758 + 0.695721I$	$1.01542 + 5.69298I$	$-5.32566 - 8.42870I$
$u = 0.423758 - 0.695721I$	$1.01542 - 5.69298I$	$-5.32566 + 8.42870I$
$u = -0.373673 + 0.691083I$	$-3.05801 - 2.71446I$	$-12.01209 + 6.09741I$
$u = -0.373673 - 0.691083I$	$-3.05801 + 2.71446I$	$-12.01209 - 6.09741I$
$u = 0.301840 + 0.720122I$	$0.268239 - 0.062723I$	$-7.61119 - 1.27500I$
$u = 0.301840 - 0.720122I$	$0.268239 + 0.062723I$	$-7.61119 + 1.27500I$
$u = -0.085060 + 0.774106I$	$-0.61920 + 1.71941I$	$-8.31003 - 3.37529I$
$u = -0.085060 - 0.774106I$	$-0.61920 - 1.71941I$	$-8.31003 + 3.37529I$
$u = -0.573822 + 0.292341I$	$9.62917 - 3.10105I$	$3.62624 + 3.32555I$
$u = -0.573822 - 0.292341I$	$9.62917 + 3.10105I$	$3.62624 - 3.32555I$
$u = -0.445524 + 0.459511I$	$5.05128 - 1.59378I$	$2.60026 + 4.57588I$
$u = -0.445524 - 0.459511I$	$5.05128 + 1.59378I$	$2.60026 - 4.57588I$
$u = 0.592961 + 0.236270I$	$9.02899 - 6.97871I$	$2.70616 + 3.27231I$
$u = 0.592961 - 0.236270I$	$9.02899 + 6.97871I$	$2.70616 - 3.27231I$
$u = -0.570616 + 0.237617I$	$3.05307 + 3.70586I$	$-0.77253 - 3.59782I$
$u = -0.570616 - 0.237617I$	$3.05307 - 3.70586I$	$-0.77253 + 3.59782I$
$u = 0.552309 + 0.268389I$	$3.39541 + 0.29109I$	$0.41142 - 3.33717I$
$u = 0.552309 - 0.268389I$	$3.39541 - 0.29109I$	$0.41142 + 3.33717I$
$u = -0.029521 + 1.409530I$	$4.52945 - 5.12440I$	0
$u = -0.029521 - 1.409530I$	$4.52945 + 5.12440I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.263506 + 0.518367I$	$-0.175692 + 1.026690I$	$-3.26382 - 6.43248I$
$u = 0.263506 - 0.518367I$	$-0.175692 - 1.026690I$	$-3.26382 + 6.43248I$
$u = 0.01406 + 1.42792I$	$-1.64302 + 2.04334I$	0
$u = 0.01406 - 1.42792I$	$-1.64302 - 2.04334I$	0
$u = 0.490035 + 0.102215I$	$2.69779 - 2.53971I$	$-0.68814 + 3.21089I$
$u = 0.490035 - 0.102215I$	$2.69779 + 2.53971I$	$-0.68814 - 3.21089I$
$u = -0.08759 + 1.53351I$	$-1.60105 - 3.31687I$	0
$u = -0.08759 - 1.53351I$	$-1.60105 + 3.31687I$	0
$u = -0.423131$	-1.20479	-7.49580
$u = 0.07142 + 1.57608I$	$-7.46190 + 2.18967I$	0
$u = 0.07142 - 1.57608I$	$-7.46190 - 2.18967I$	0
$u = -0.15017 + 1.57667I$	$1.23526 - 3.11687I$	0
$u = -0.15017 - 1.57667I$	$1.23526 + 3.11687I$	0
$u = 0.14422 + 1.58462I$	$-5.21473 + 5.71673I$	0
$u = 0.14422 - 1.58462I$	$-5.21473 - 5.71673I$	0
$u = -0.04686 + 1.59696I$	$-8.59473 + 1.10722I$	0
$u = -0.04686 - 1.59696I$	$-8.59473 - 1.10722I$	0
$u = -0.14844 + 1.59187I$	$-5.81777 - 9.84244I$	0
$u = -0.14844 - 1.59187I$	$-5.81777 + 9.84244I$	0
$u = 0.15352 + 1.59359I$	$0.10974 + 13.29100I$	0
$u = 0.15352 - 1.59359I$	$0.10974 - 13.29100I$	0
$u = -0.10679 + 1.60050I$	$-10.87520 - 4.50273I$	0
$u = -0.10679 - 1.60050I$	$-10.87520 + 4.50273I$	0
$u = 0.08882 + 1.60302I$	$-7.65490 + 1.41234I$	0
$u = 0.08882 - 1.60302I$	$-7.65490 - 1.41234I$	0
$u = 0.12015 + 1.60190I$	$-6.80500 + 7.70998I$	0
$u = 0.12015 - 1.60190I$	$-6.80500 - 7.70998I$	0
$u = 0.03277 + 1.60858I$	$-3.11395 - 4.26425I$	0
$u = 0.03277 - 1.60858I$	$-3.11395 + 4.26425I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{59} - 15u^{58} + \cdots + 16u - 1$
c_2, c_3, c_7 c_8	$u^{59} - u^{58} + \cdots - 2u + 1$
c_4	$u^{59} - u^{58} + \cdots - 60u + 29$
c_5, c_{10}, c_{11}	$u^{59} - u^{58} + \cdots + u^2 + 1$
c_6	$u^{59} + u^{58} + \cdots - 32u + 185$
c_9, c_{12}	$u^{59} - 9u^{58} + \cdots - 312u + 17$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{59} - y^{58} + \cdots - 66y - 1$
c_2, c_3, c_7 c_8	$y^{59} + 67y^{58} + \cdots - 2y - 1$
c_4	$y^{59} - 9y^{58} + \cdots + 8762y - 841$
c_5, c_{10}, c_{11}	$y^{59} + 55y^{58} + \cdots - 2y - 1$
c_6	$y^{59} + 19y^{58} + \cdots - 707526y - 34225$
c_9, c_{12}	$y^{59} + 47y^{58} + \cdots - 338y - 289$