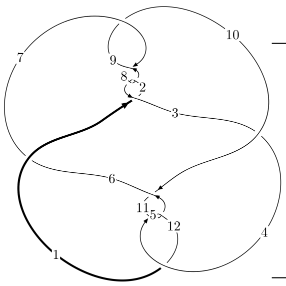
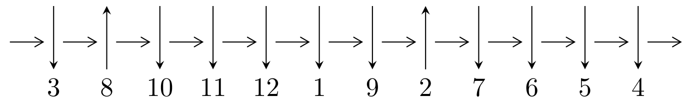
$12a_{0764}$ ($K12a_{0764}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{66} - u^{65} + \cdots - u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 66 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. $I_1^u = \langle u^{66} - u^{65} + \cdots - u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{11} - 2u^9 - 4u^7 - 4u^5 - 3u^3 \\ -u^{11} - u^9 - 2u^7 - u^5 + u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{10} - u^8 - 2u^6 - u^4 + u^2 + 1 \\ -u^{12} - 2u^{10} - 4u^8 - 4u^6 - 3u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{26} + 3u^{24} + \cdots + u^2 + 1 \\ u^{28} + 4u^{26} + \cdots + 12u^8 + u^4 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^{27} + 4u^{25} + \cdots + 12u^7 + u^3 \\ u^{27} + 3u^{25} + \cdots + u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{65} - 8u^{63} + \cdots - 6u^3 - u \\ -u^{65} + u^{64} + \cdots - u - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{65} + 32u^{63} + \cdots - 16u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7, c_9	$u^{66} + 17u^{65} + \cdots + u + 1$
c_2, c_8	$u^{66} - u^{65} + \cdots - u - 1$
c_3, c_6	$u^{66} - u^{65} + \cdots - 36u - 40$
c_4, c_5, c_{11}	$u^{66} + u^{65} + \cdots - 3u - 1$
c_{10}, c_{12}	$u^{66} - 3u^{65} + \cdots + 3u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7, c_9	$y^{66} + 65y^{65} + \cdots - 31y + 1$
c_2, c_8	$y^{66} + 17y^{65} + \cdots + y + 1$
c_3, c_6	$y^{66} - 35y^{65} + \cdots - 32496y + 1600$
c_4, c_5, c_{11}	$y^{66} - 55y^{65} + \cdots + y + 1$
c_{10}, c_{12}	$y^{66} + 37y^{65} + \cdots - 3y + 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.207533+0.981086I$	$-6.35096+4.33929I$	$-15.3912-1.6731I$
$u=-0.207533-0.981086I$	$-6.35096-4.33929I$	$-15.3912+1.6731I$
$u=-0.322302+0.940128I$	$-3.57030-2.48361I$	$-12.14309+4.22745I$
$u=-0.322302-0.940128I$	$-3.57030+2.48361I$	$-12.14309-4.22745I$
$u=-0.272653+0.940034I$	$-3.76345-2.65206I$	$-14.2785+5.3930I$
$u=-0.272653-0.940034I$	$-3.76345+2.65206I$	$-14.2785-5.3930I$
$u=\quad 0.208676+0.955825I$	$-1.57258-0.64572I$	$-10.64970+0.22730I$
$u=\quad 0.208676-0.955825I$	$-1.57258+0.64572I$	$-10.64970-0.22730I$
$u=\quad 0.271816+0.990028I$	$-10.11990+2.95711I$	$-17.8433-4.0853I$
$u=\quad 0.271816-0.990028I$	$-10.11990-2.95711I$	$-17.8433+4.0853I$
$u=\quad 0.327602+0.976374I$	$-0.88010+6.28741I$	$-8.00000-7.78129I$
$u=\quad 0.327602-0.976374I$	$-0.88010-6.28741I$	$-8.00000+7.78129I$
$u=-0.326605+0.991495I$	$-5.65622-10.20650I$	$-13.5289+9.0267I$
$u=-0.326605-0.991495I$	$-5.65622+10.20650I$	$-13.5289-9.0267I$
$u=\quad 0.757467+0.819779I$	$-0.27528+5.62378I$	0
$u=\quad 0.757467-0.819779I$	$-0.27528-5.62378I$	0
$u=\quad 0.524653+0.709653I$	$-0.64902+5.65149I$	$-7.27056-7.50619I$
$u=\quad 0.524653-0.709653I$	$-0.64902-5.65149I$	$-7.27056+7.50619I$
$u=-0.136824+0.865327I$	$-4.39217-2.36691I$	$-15.8873+4.0107I$
$u=-0.136824-0.865327I$	$-4.39217+2.36691I$	$-15.8873-4.0107I$
$u=-0.832435+0.793863I$	$-3.01879+1.47388I$	0
$u=-0.832435-0.793863I$	$-3.01879-1.47388I$	0
$u=-0.796593+0.845883I$	$4.46763-2.52307I$	0
$u=-0.796593-0.845883I$	$4.46763+2.52307I$	0
$u=\quad 0.829323+0.823308I$	$3.15412-0.61109I$	0
$u=\quad 0.829323-0.823308I$	$3.15412+0.61109I$	0
$u=\quad 0.866881+0.806451I$	$2.07449-8.47396I$	0
$u=\quad 0.866881-0.806451I$	$2.07449+8.47396I$	0
$u=-0.863745+0.813119I$	$6.79180+4.40102I$	0
$u=-0.863745-0.813119I$	$6.79180-4.40102I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.514926+0.629940I$	$3.49483-1.91824I$	$-1.30925+4.40205I$
$u=-0.514926-0.629940I$	$3.49483+1.91824I$	$-1.30925-4.40205I$
$u=\ \ 0.857102+0.823493I$	$3.93034-0.31479I$	0
$u=\ \ 0.857102-0.823493I$	$3.93034+0.31479I$	0
$u=\ \ 0.752368+0.941982I$	$-0.652984+0.115352I$	0
$u=\ \ 0.752368-0.941982I$	$-0.652984-0.115352I$	0
$u=-0.774741+0.932829I$	$4.19655-3.39080I$	0
$u=-0.774741-0.932829I$	$4.19655+3.39080I$	0
$u=-0.849189+0.896624I$	$6.84678+0.99588I$	0
$u=-0.849189-0.896624I$	$6.84678-0.99588I$	0
$u=\ \ 0.845586+0.905987I$	$10.71050+3.14132I$	0
$u=\ \ 0.845586-0.905987I$	$10.71050-3.14132I$	0
$u=\ \ 0.789852+0.955570I$	$2.74573+6.66729I$	0
$u=\ \ 0.789852-0.955570I$	$2.74573-6.66729I$	0
$u=-0.842344+0.915164I$	$6.78882-7.27941I$	0
$u=-0.842344-0.915164I$	$6.78882+7.27941I$	0
$u=\ \ 0.519959+0.546372I$	$-0.16044-1.78515I$	$-5.05685+0.I$
$u=\ \ 0.519959-0.546372I$	$-0.16044+1.78515I$	$-5.05685+0.I$
$u=-0.779938+0.972264I$	$-3.56585-7.50384I$	0
$u=-0.779938-0.972264I$	$-3.56585+7.50384I$	0
$u=\ \ 0.804861+0.967797I$	$3.47971+6.50090I$	0
$u=\ \ 0.804861-0.967797I$	$3.47971-6.50090I$	0
$u=-0.803690+0.976805I$	$6.28091-10.60210I$	0
$u=-0.803690-0.976805I$	$6.28091+10.60210I$	0
$u=\ \ 0.802049+0.981776I$	$1.5273+14.6781I$	0
$u=\ \ 0.802049-0.981776I$	$1.5273-14.6781I$	0
$u=-0.629766+0.121194I$	$-2.95160+6.83126I$	$-7.61691-5.02881I$
$u=-0.629766-0.121194I$	$-2.95160-6.83126I$	$-7.61691+5.02881I$
$u=\ \ 0.175327+0.613584I$	$-0.378995+0.828694I$	$-8.44183-8.08874I$
$u=\ \ 0.175327-0.613584I$	$-0.378995-0.828694I$	$-8.44183+8.08874I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.599127 + 0.137206I$	$1.69680 - 2.97772I$	$-2.56592 + 3.49038I$
$u = \quad 0.599127 - 0.137206I$	$1.69680 + 2.97772I$	$-2.56592 - 3.49038I$
$u = \quad 0.614002$	-7.09939	-11.6040
$u = -0.541100 + 0.190827I$	$-1.30250 - 0.68240I$	$-5.55669 + 0.60358I$
$u = -0.541100 - 0.190827I$	$-1.30250 + 0.68240I$	$-5.55669 - 0.60358I$
$u = -0.490541$	-1.14219	-8.66240

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7, c_9	$u^{66} + 17u^{65} + \cdots + u + 1$
c_2, c_8	$u^{66} - u^{65} + \cdots - u - 1$
c_3, c_6	$u^{66} - u^{65} + \cdots - 36u - 40$
c_4, c_5, c_{11}	$u^{66} + u^{65} + \cdots - 3u - 1$
c_{10}, c_{12}	$u^{66} - 3u^{65} + \cdots + 3u + 3$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7, c_9	$y^{66} + 65y^{65} + \cdots - 31y + 1$
c_2, c_8	$y^{66} + 17y^{65} + \cdots + y + 1$
c_3, c_6	$y^{66} - 35y^{65} + \cdots - 32496y + 1600$
c_4, c_5, c_{11}	$y^{66} - 55y^{65} + \cdots + y + 1$
c_{10}, c_{12}	$y^{66} + 37y^{65} + \cdots - 3y + 9$