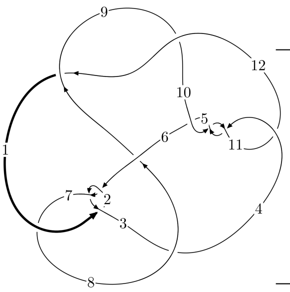
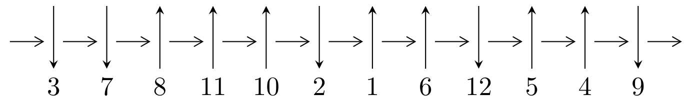
$12a_{0550}$ $(K12a_{0550})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{74} + u^{73} + \cdots + u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 74 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. $I_1^u = \langle u^{74} + u^{73} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^5 + 2u^3 - u \\ u^5 + 3u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^9 + 4u^7 + 3u^5 - 2u^3 + u \\ u^9 + 5u^7 + 7u^5 + 2u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{11} - 6u^9 - 12u^7 - 8u^5 - u^3 - 2u \\ u^{13} + 7u^{11} + 17u^9 + 16u^7 + 6u^5 + 5u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{24} - 13u^{22} + \cdots - 2u^2 + 1 \\ u^{26} + 14u^{24} + \cdots + 10u^4 + u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{59} - 32u^{57} + \cdots + 28u^5 + u^3 \\ u^{61} + 33u^{59} + \cdots + u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{31} - 16u^{29} + \cdots - 4u^3 - 2u \\ -u^{31} - 17u^{29} + \cdots + 2u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{73} + 4u^{72} + \cdots + 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{74} + 35u^{73} + \cdots - u + 1$
c_2, c_6	$u^{74} - u^{73} + \cdots - u + 1$
c_3	$u^{74} + u^{73} + \cdots - 879u + 481$
c_4, c_5, c_{10} c_{11}	$u^{74} - u^{73} + \cdots - u + 1$
c_7	$u^{74} - 3u^{73} + \cdots - 325u + 175$
c_8	$u^{74} + 9u^{73} + \cdots + 169u + 13$
c_9, c_{12}	$u^{74} - 13u^{73} + \cdots - 2717u + 283$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{74} + 9y^{73} + \cdots + 5y + 1$
c_2, c_6	$y^{74} - 35y^{73} + \cdots + y + 1$
c_3	$y^{74} - 19y^{73} + \cdots - 9331555y + 231361$
c_4, c_5, c_{10} c_{11}	$y^{74} + 81y^{73} + \cdots + y + 1$
c_7	$y^{74} + 17y^{73} + \cdots + 1185525y + 30625$
c_8	$y^{74} + 5y^{73} + \cdots + 4433y + 169$
c_9, c_{12}	$y^{74} + 45y^{73} + \cdots + 403241y + 80089$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.581679 + 0.588687I$	$1.14751 - 12.21490I$	$2.00000 + 10.62461I$
$u = -0.581679 - 0.588687I$	$1.14751 + 12.21490I$	$2.00000 - 10.62461I$
$u = 0.579078 + 0.579968I$	$3.39034 + 7.17138I$	$4.72098 - 6.80374I$
$u = 0.579078 - 0.579968I$	$3.39034 - 7.17138I$	$4.72098 + 6.80374I$
$u = -0.558960 + 0.584212I$	$-1.22103 - 4.59999I$	$-1.85198 + 5.42057I$
$u = -0.558960 - 0.584212I$	$-1.22103 + 4.59999I$	$-1.85198 - 5.42057I$
$u = 0.580042 + 0.552186I$	$4.60737 + 4.92092I$	$6.44482 - 6.98206I$
$u = 0.580042 - 0.552186I$	$4.60737 - 4.92092I$	$6.44482 + 6.98206I$
$u = -0.581910 + 0.533281I$	$3.51551 - 0.09713I$	$4.79421 + 0.95551I$
$u = -0.581910 - 0.533281I$	$3.51551 + 0.09713I$	$4.79421 - 0.95551I$
$u = 0.160664 + 0.764547I$	$-3.59023 + 7.24183I$	$-4.81965 - 8.01497I$
$u = 0.160664 - 0.764547I$	$-3.59023 - 7.24183I$	$-4.81965 + 8.01497I$
$u = 0.081400 + 0.760927I$	$-5.25802 - 0.19086I$	$-8.37896 - 0.60569I$
$u = 0.081400 - 0.760927I$	$-5.25802 + 0.19086I$	$-8.37896 + 0.60569I$
$u = 0.475714 + 0.583485I$	$-2.85675 + 4.95140I$	$-3.45849 - 7.85168I$
$u = 0.475714 - 0.583485I$	$-2.85675 - 4.95140I$	$-3.45849 + 7.85168I$
$u = -0.594230 + 0.443922I$	$3.77889 - 3.92096I$	$5.61393 + 5.93891I$
$u = -0.594230 - 0.443922I$	$3.77889 + 3.92096I$	$5.61393 - 5.93891I$
$u = -0.149812 + 0.724787I$	$-1.30291 - 2.53624I$	$-1.75249 + 4.49036I$
$u = -0.149812 - 0.724787I$	$-1.30291 + 2.53624I$	$-1.75249 - 4.49036I$
$u = 0.595573 + 0.422112I$	$4.98992 - 0.90435I$	$7.85161 + 0.13371I$
$u = 0.595573 - 0.422112I$	$4.98992 + 0.90435I$	$7.85161 - 0.13371I$
$u = -0.611496 + 0.376425I$	$1.77025 + 8.14990I$	$3.28357 - 4.51693I$
$u = -0.611496 - 0.376425I$	$1.77025 - 8.14990I$	$3.28357 + 4.51693I$
$u = 0.603907 + 0.386844I$	$3.95690 - 3.13486I$	$6.57615 + 0.47238I$
$u = 0.603907 - 0.386844I$	$3.95690 + 3.13486I$	$6.57615 - 0.47238I$
$u = 0.384733 + 0.589181I$	$-2.15217 - 2.34776I$	$-2.61549 - 0.50712I$
$u = 0.384733 - 0.589181I$	$-2.15217 + 2.34776I$	$-2.61549 + 0.50712I$
$u = -0.457206 + 0.515716I$	$0.32851 - 1.59321I$	$1.85928 + 4.31200I$
$u = -0.457206 - 0.515716I$	$0.32851 + 1.59321I$	$1.85928 - 4.31200I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.576050 + 0.370037I$	$-0.597920 + 0.702387I$	$0.117490 + 1.017971I$
$u = -0.576050 - 0.370037I$	$-0.597920 - 0.702387I$	$0.117490 - 1.017971I$
$u = -0.191536 + 0.572330I$	$-0.30101 - 1.44762I$	$-0.21354 + 6.41359I$
$u = -0.191536 - 0.572330I$	$-0.30101 + 1.44762I$	$-0.21354 - 6.41359I$
$u = -0.13095 + 1.44541I$	$-4.02653 + 5.58703I$	0
$u = -0.13095 - 1.44541I$	$-4.02653 - 5.58703I$	0
$u = 0.13429 + 1.45675I$	$-1.94463 - 0.59547I$	0
$u = 0.13429 - 1.45675I$	$-1.94463 + 0.59547I$	0
$u = -0.10830 + 1.47365I$	$-6.49129 - 1.54826I$	0
$u = -0.10830 - 1.47365I$	$-6.49129 + 1.54826I$	0
$u = 0.14890 + 1.47840I$	$-1.17433 + 1.68063I$	0
$u = 0.14890 - 1.47840I$	$-1.17433 - 1.68063I$	0
$u = 0.442216 + 0.250522I$	$-2.00759 - 1.71991I$	$-0.002985 + 0.493302I$
$u = 0.442216 - 0.250522I$	$-2.00759 + 1.71991I$	$-0.002985 - 0.493302I$
$u = -0.15679 + 1.48846I$	$-2.52069 - 6.55186I$	0
$u = -0.15679 - 1.48846I$	$-2.52069 + 6.55186I$	0
$u = 0.465321 + 0.114222I$	$-0.77170 + 5.14412I$	$3.35203 - 6.10091I$
$u = 0.465321 - 0.114222I$	$-0.77170 - 5.14412I$	$3.35203 + 6.10091I$
$u = -0.16980 + 1.53508I$	$-3.33883 - 2.79785I$	0
$u = -0.16980 - 1.53508I$	$-3.33883 + 2.79785I$	0
$u = -0.02101 + 1.54796I$	$-7.42999 - 2.03723I$	0
$u = -0.02101 - 1.54796I$	$-7.42999 + 2.03723I$	0
$u = -0.13143 + 1.54609I$	$-6.62453 - 3.70192I$	0
$u = -0.13143 - 1.54609I$	$-6.62453 + 3.70192I$	0
$u = 0.17209 + 1.54345I$	$-2.35401 + 7.64003I$	0
$u = 0.17209 - 1.54345I$	$-2.35401 - 7.64003I$	0
$u = 0.11928 + 1.55708I$	$-9.35786 - 0.47227I$	0
$u = 0.11928 - 1.55708I$	$-9.35786 + 0.47227I$	0
$u = 0.17433 + 1.55520I$	$-3.72276 + 9.91652I$	0
$u = 0.17433 - 1.55520I$	$-3.72276 - 9.91652I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.13939 + 1.55951I$	$-10.05520 + 7.19221I$	0
$u = 0.13939 - 1.55951I$	$-10.05520 - 7.19221I$	0
$u = -0.16695 + 1.55795I$	$-8.37394 - 7.24510I$	0
$u = -0.16695 - 1.55795I$	$-8.37394 + 7.24510I$	0
$u = -0.17594 + 1.55858I$	$-6.0096 - 14.9821I$	0
$u = -0.17594 - 1.55858I$	$-6.0096 + 14.9821I$	0
$u = -0.412346 + 0.073322I$	$1.227240 - 0.638691I$	$7.97254 + 1.54143I$
$u = -0.412346 - 0.073322I$	$1.227240 + 0.638691I$	$7.97254 - 1.54143I$
$u = -0.02854 + 1.58475I$	$-9.12688 - 3.11271I$	0
$u = -0.02854 - 1.58475I$	$-9.12688 + 3.11271I$	0
$u = 0.01619 + 1.59177I$	$-13.22470 + 0.12897I$	0
$u = 0.01619 - 1.59177I$	$-13.22470 - 0.12897I$	0
$u = 0.03179 + 1.59277I$	$-11.57340 + 7.87379I$	0
$u = 0.03179 - 1.59277I$	$-11.57340 - 7.87379I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{74} + 35u^{73} + \cdots - u + 1$
c_2, c_6	$u^{74} - u^{73} + \cdots - u + 1$
c_3	$u^{74} + u^{73} + \cdots - 879u + 481$
c_4, c_5, c_{10} c_{11}	$u^{74} - u^{73} + \cdots - u + 1$
c_7	$u^{74} - 3u^{73} + \cdots - 325u + 175$
c_8	$u^{74} + 9u^{73} + \cdots + 169u + 13$
c_9, c_{12}	$u^{74} - 13u^{73} + \cdots - 2717u + 283$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{74} + 9y^{73} + \cdots + 5y + 1$
c_2, c_6	$y^{74} - 35y^{73} + \cdots + y + 1$
c_3	$y^{74} - 19y^{73} + \cdots - 9331555y + 231361$
c_4, c_5, c_{10} c_{11}	$y^{74} + 81y^{73} + \cdots + y + 1$
c_7	$y^{74} + 17y^{73} + \cdots + 1185525y + 30625$
c_8	$y^{74} + 5y^{73} + \cdots + 4433y + 169$
c_9, c_{12}	$y^{74} + 45y^{73} + \cdots + 403241y + 80089$