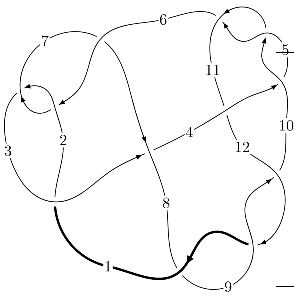
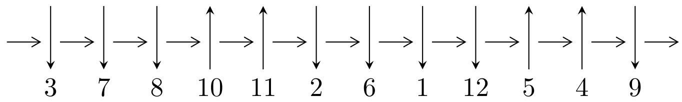
$12a_{0532}$ ($K12a_{0532}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{62} + u^{61} + \cdots + u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 62 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. $I_1^u = \langle u^{62} + u^{61} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^8 + u^6 - u^4 + 1 \\ -u^8 + 2u^6 - 2u^4 + 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^9 + 2u^7 - 3u^5 + 2u^3 - u \\ -u^{11} + u^9 - 2u^7 + u^5 - u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^{16} + 3u^{14} - 7u^{12} + 10u^{10} - 11u^8 + 8u^6 - 4u^4 + 1 \\ -u^{18} + 2u^{16} - 5u^{14} + 6u^{12} - 7u^{10} + 6u^8 - 4u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{23} + 4u^{21} + \cdots + 4u^3 - 2u \\ -u^{25} + 3u^{23} + \cdots - 3u^5 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{34} - 5u^{32} + \cdots + 3u^2 + 1 \\ u^{34} - 6u^{32} + \cdots + 8u^4 - u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{56} - 9u^{54} + \cdots + 2u^2 + 1 \\ u^{58} - 8u^{56} + \cdots - 6u^4 + u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{60} - 36u^{58} + \cdots + 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{62} + 19u^{61} + \cdots - 3u + 1$
c_2, c_6	$u^{62} - u^{61} + \cdots - u + 1$
c_3	$u^{62} + u^{61} + \cdots - 1604u + 676$
c_4, c_5, c_{10}	$u^{62} + u^{61} + \cdots + u + 1$
c_8, c_9, c_{12}	$u^{62} - 7u^{61} + \cdots - 255u + 23$
c_{11}	$u^{62} - 3u^{61} + \cdots + 943u - 949$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{62} + 49y^{61} + \cdots + 7y + 1$
c_2, c_6	$y^{62} - 19y^{61} + \cdots + 3y + 1$
c_3	$y^{62} + 25y^{61} + \cdots + 6973656y + 456976$
c_4, c_5, c_{10}	$y^{62} - 59y^{61} + \cdots + 3y + 1$
c_8, c_9, c_{12}	$y^{62} + 69y^{61} + \cdots + 4527y + 529$
c_{11}	$y^{62} - 31y^{61} + \cdots - 27237285y + 900601$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.989985 + 0.122617I$	$1.32863 - 4.99314I$	$-5.10286 + 6.83275I$
$u = \quad 0.989985 - 0.122617I$	$1.32863 + 4.99314I$	$-5.10286 - 6.83275I$
$u = -0.809064 + 0.581444I$	$3.36810 - 0.06751I$	$-1.94023 + 0.35609I$
$u = -0.809064 - 0.581444I$	$3.36810 + 0.06751I$	$-1.94023 - 0.35609I$
$u = \quad 0.975055$	-0.841645	-8.82830
$u = -0.962183 + 0.082730I$	$-3.35982 + 2.23077I$	$-11.92321 - 6.16182I$
$u = -0.962183 - 0.082730I$	$-3.35982 - 2.23077I$	$-11.92321 + 6.16182I$
$u = \quad 0.734854 + 0.732067I$	$2.04758 + 1.64642I$	$-2.09598 - 4.37427I$
$u = \quad 0.734854 - 0.732067I$	$2.04758 - 1.64642I$	$-2.09598 + 4.37427I$
$u = \quad 1.007400 + 0.257971I$	$3.02841 - 0.92384I$	$-4.00000 + 0.56914I$
$u = \quad 1.007400 - 0.257971I$	$3.02841 + 0.92384I$	$-4.00000 - 0.56914I$
$u = -0.714319 + 0.763961I$	$7.22652 - 4.54026I$	$2.91659 + 4.06961I$
$u = -0.714319 - 0.763961I$	$7.22652 + 4.54026I$	$2.91659 - 4.06961I$
$u = -1.021670 + 0.240610I$	$2.88991 + 5.19815I$	$-4.00000 - 6.77683I$
$u = -1.021670 - 0.240610I$	$2.88991 - 5.19815I$	$-4.00000 + 6.77683I$
$u = -1.015640 + 0.277475I$	$9.38200 - 2.18146I$	$-60.10 - 0.620626I$
$u = -1.015640 - 0.277475I$	$9.38200 + 2.18146I$	$-60.10 + 0.620626I$
$u = \quad 1.037690 + 0.240795I$	$9.12317 - 8.49284I$	$0. + 6.46268I$
$u = \quad 1.037690 - 0.240795I$	$9.12317 + 8.49284I$	$0. - 6.46268I$
$u = -0.794505 + 0.726721I$	$3.07799 + 1.41254I$	$2.04320 - 3.32582I$
$u = -0.794505 - 0.726721I$	$3.07799 - 1.41254I$	$2.04320 + 3.32582I$
$u = \quad 0.884379 + 0.631379I$	$-0.51363 - 2.45305I$	$-8.70061 + 2.47945I$
$u = \quad 0.884379 - 0.631379I$	$-0.51363 + 2.45305I$	$-8.70061 - 2.47945I$
$u = \quad 0.740332 + 0.843987I$	$9.98619 + 4.42504I$	0
$u = \quad 0.740332 - 0.843987I$	$9.98619 - 4.42504I$	0
$u = \quad 0.814940 + 0.773369I$	$9.03131 - 2.95277I$	0
$u = \quad 0.814940 - 0.773369I$	$9.03131 + 2.95277I$	0
$u = -0.736127 + 0.850348I$	$16.3081 - 7.8313I$	0
$u = -0.736127 - 0.850348I$	$16.3081 + 7.8313I$	0
$u = -0.749447 + 0.842317I$	$10.15460 + 0.03373I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.749447 - 0.842317I$	$10.15460 - 0.03373I$	0
$u = 0.870586$	-1.55742	-4.71840
$u = 0.756113 + 0.848275I$	$16.6739 - 3.2136I$	0
$u = 0.756113 - 0.848275I$	$16.6739 + 3.2136I$	0
$u = -0.935495 + 0.651467I$	$2.87996 + 4.99342I$	0
$u = -0.935495 - 0.651467I$	$2.87996 - 4.99342I$	0
$u = -0.930376 + 0.707827I$	$2.66249 + 4.07137I$	0
$u = -0.930376 - 0.707827I$	$2.66249 - 4.07137I$	0
$u = 0.926438 + 0.747239I$	$8.69067 - 2.79047I$	0
$u = 0.926438 - 0.747239I$	$8.69067 + 2.79047I$	0
$u = 0.965239 + 0.702224I$	$1.35675 - 7.13213I$	0
$u = 0.965239 - 0.702224I$	$1.35675 + 7.13213I$	0
$u = -0.982215 + 0.711411I$	$6.42370 + 10.13930I$	0
$u = -0.982215 - 0.711411I$	$6.42370 - 10.13930I$	0
$u = -0.995337 + 0.760558I$	$9.39615 + 5.95109I$	0
$u = -0.995337 - 0.760558I$	$9.39615 - 5.95109I$	0
$u = 1.001000 + 0.757438I$	$9.18276 - 10.40390I$	0
$u = 1.001000 - 0.757438I$	$9.18276 + 10.40390I$	0
$u = 0.994404 + 0.767003I$	$15.9378 - 2.8100I$	0
$u = 0.994404 - 0.767003I$	$15.9378 + 2.8100I$	0
$u = -1.005970 + 0.758828I$	$15.4757 + 13.8328I$	0
$u = -1.005970 - 0.758828I$	$15.4757 - 13.8328I$	0
$u = -0.620405 + 0.327589I$	$3.29016 - 0.22305I$	$-0.445284 - 1.174195I$
$u = -0.620405 - 0.327589I$	$3.29016 + 0.22305I$	$-0.445284 + 1.174195I$
$u = -0.024632 + 0.694041I$	$12.57310 + 5.42065I$	$5.59415 - 3.08644I$
$u = -0.024632 - 0.694041I$	$12.57310 - 5.42065I$	$5.59415 + 3.08644I$
$u = 0.012401 + 0.677140I$	$6.22588 - 2.17623I$	$2.37812 + 3.15857I$
$u = 0.012401 - 0.677140I$	$6.22588 + 2.17623I$	$2.37812 - 3.15857I$
$u = -0.163278 + 0.512817I$	$4.83308 + 3.11441I$	$3.99348 - 4.97298I$
$u = -0.163278 - 0.512817I$	$4.83308 - 3.11441I$	$3.99348 + 4.97298I$

	Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.172662 + 0.354819I$	$-0.089492 - 0.934789I$	$-1.87222 + 7.30268I$
$u =$	$0.172662 - 0.354819I$	$-0.089492 + 0.934789I$	$-1.87222 - 7.30268I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{62} + 19u^{61} + \cdots - 3u + 1$
c_2, c_6	$u^{62} - u^{61} + \cdots - u + 1$
c_3	$u^{62} + u^{61} + \cdots - 1604u + 676$
c_4, c_5, c_{10}	$u^{62} + u^{61} + \cdots + u + 1$
c_8, c_9, c_{12}	$u^{62} - 7u^{61} + \cdots - 255u + 23$
c_{11}	$u^{62} - 3u^{61} + \cdots + 943u - 949$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{62} + 49y^{61} + \cdots + 7y + 1$
c_2, c_6	$y^{62} - 19y^{61} + \cdots + 3y + 1$
c_3	$y^{62} + 25y^{61} + \cdots + 6973656y + 456976$
c_4, c_5, c_{10}	$y^{62} - 59y^{61} + \cdots + 3y + 1$
c_8, c_9, c_{12}	$y^{62} + 69y^{61} + \cdots + 4527y + 529$
c_{11}	$y^{62} - 31y^{61} + \cdots - 27237285y + 900601$