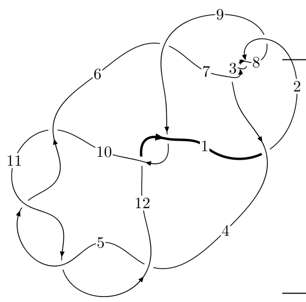
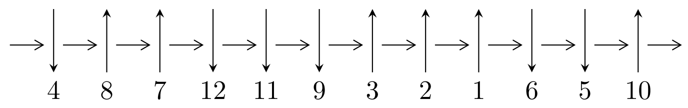
$12a_{1127}$ $(K12a_{1127})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{48} + u^{47} + \cdots + 2u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 48 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. $\boldsymbol{I_1^u = \langle u^{48} + u^{47} + \cdots + 2u + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^2 + 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^6 + 3u^4 + 2u^2 + 1 \\ -u^6 - 2u^4 + u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{15} + 8u^{13} + 24u^{11} + 34u^9 + 26u^7 + 14u^5 + 4u^3 + 2u \\ -u^{15} - 7u^{13} - 16u^{11} - 11u^9 + 2u^7 + 2u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^5 + 2u^3 - u \\ u^7 + 3u^5 + 2u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^{27} + 14u^{25} + \cdots + u^3 + 2u \\ u^{29} + 15u^{27} + \cdots + 5u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^{46} + 25u^{44} + \cdots + 4u^2 + 1 \\ -u^{46} - 24u^{44} + \cdots + 6u^4 - u^2 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u^{24} + 13u^{22} + \cdots + 4u^2 + 1 \\ -u^{24} - 12u^{22} + \cdots + 2u^4 + 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{47} + 4u^{46} + \cdots + 24u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{48} - 9u^{47} + \cdots - 48u + 17$
c_2, c_3, c_7 c_8	$u^{48} - u^{47} + \cdots - 2u + 1$
c_4, c_5, c_{10} c_{11}	$u^{48} + u^{47} + \cdots + 2u + 1$
c_9, c_{12}	$u^{48} + 9u^{47} + \cdots + 48u + 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_9 c_{12}	$y^{48} + 25y^{47} + \cdots + 8984y + 289$
c_2, c_3, c_4 c_5, c_7, c_8 c_{10}, c_{11}	$y^{48} + 53y^{47} + \cdots + 8y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.571105 + 0.602504I$	$7.23980 - 9.54989I$	$3.31919 + 7.94832I$
$u = -0.571105 - 0.602504I$	$7.23980 + 9.54989I$	$3.31919 - 7.94832I$
$u = 0.119738 + 0.805469I$	$2.92614 + 4.24554I$	$-2.30656 - 4.16682I$
$u = 0.119738 - 0.805469I$	$2.92614 - 4.24554I$	$-2.30656 + 4.16682I$
$u = 0.549622 + 0.599161I$	$6.94310I$	$0. - 9.44534I$
$u = 0.549622 - 0.599161I$	$-6.94310I$	$0. + 9.44534I$
$u = -0.041579 + 0.787901I$	$-3.70641 - 1.86423I$	$-6.68982 + 4.28103I$
$u = -0.041579 - 0.787901I$	$-3.70641 + 1.86423I$	$-6.68982 - 4.28103I$
$u = -0.518355 + 0.592676I$	$-0.74026 - 3.08667I$	$-2.29165 + 3.31825I$
$u = -0.518355 - 0.592676I$	$-0.74026 + 3.08667I$	$-2.29165 - 3.31825I$
$u = -0.590762 + 0.488652I$	$11.79350 - 2.01666I$	$7.44353 + 3.51119I$
$u = -0.590762 - 0.488652I$	$11.79350 + 2.01666I$	$7.44353 - 3.51119I$
$u = 0.447929 + 0.612038I$	$4.96768 + 0.96718I$	$0.97174 - 3.83444I$
$u = 0.447929 - 0.612038I$	$4.96768 - 0.96718I$	$0.97174 + 3.83444I$
$u = 0.539062 + 0.483661I$	$3.70641 + 1.86423I$	$6.68982 - 4.28103I$
$u = 0.539062 - 0.483661I$	$3.70641 - 1.86423I$	$6.68982 + 4.28103I$
$u = -0.605762 + 0.352402I$	$7.97171 + 5.53571I$	$5.39099 - 1.87938I$
$u = -0.605762 - 0.352402I$	$7.97171 - 5.53571I$	$5.39099 + 1.87938I$
$u = 0.572553 + 0.344141I$	$0.74026 - 3.08667I$	$2.29165 + 3.31825I$
$u = 0.572553 - 0.344141I$	$0.74026 + 3.08667I$	$2.29165 - 3.31825I$
$u = -0.503120 + 0.331554I$	$-0.502173I$	$0. + 3.98649I$
$u = -0.503120 - 0.331554I$	$0.502173I$	$0. - 3.98649I$
$u = -0.10770 + 1.43493I$	$2.35576 + 3.09747I$	0
$u = -0.10770 - 1.43493I$	$2.35576 - 3.09747I$	0
$u = 0.08834 + 1.46597I$	$-4.96768 - 0.96718I$	0
$u = 0.08834 - 1.46597I$	$-4.96768 + 0.96718I$	0
$u = 0.493520 + 0.181034I$	$6.17159 + 2.22513I$	$5.27781 - 2.91607I$
$u = 0.493520 - 0.181034I$	$6.17159 - 2.22513I$	$5.27781 + 2.91607I$
$u = -0.09667 + 1.51117I$	$-6.17159 - 2.22513I$	0
$u = -0.09667 - 1.51117I$	$-6.17159 + 2.22513I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.16565 + 1.51061I$	$5.22253 - 4.70180I$	0
$u = -0.16565 - 1.51061I$	$5.22253 + 4.70180I$	0
$u = \quad 0.14209 + 1.51979I$	$-2.92614 + 4.24554I$	0
$u = \quad 0.14209 - 1.51979I$	$-2.92614 - 4.24554I$	0
$u = -0.15299 + 1.56328I$	$-7.97171 - 5.53571I$	0
$u = -0.15299 - 1.56328I$	$-7.97171 + 5.53571I$	0
$u = \quad 0.13250 + 1.56607I$	$-2.35576 + 3.09747I$	0
$u = \quad 0.13250 - 1.56607I$	$-2.35576 - 3.09747I$	0
$u = \quad 0.16376 + 1.56429I$	$-7.23980 + 9.54989I$	0
$u = \quad 0.16376 - 1.56429I$	$-7.23980 - 9.54989I$	0
$u = -0.17214 + 1.56466I$	$-\ 12.2713I$	0
$u = -0.17214 - 1.56466I$	$12.2713I$	0
$u = -0.238363 + 0.325952I$	$-\ 0.778279I$	$0. + 8.68707I$
$u = -0.238363 - 0.325952I$	$0.778279I$	$0. - 8.68707I$
$u = -0.00724 + 1.59854I$	$-11.79350 - 2.01666I$	0
$u = -0.00724 - 1.59854I$	$-11.79350 + 2.01666I$	0
$u = \quad 0.02233 + 1.60119I$	$-5.22253 + 4.70180I$	0
$u = \quad 0.02233 - 1.60119I$	$-5.22253 - 4.70180I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{48} - 9u^{47} + \cdots - 48u + 17$
c_2, c_3, c_7 c_8	$u^{48} - u^{47} + \cdots - 2u + 1$
c_4, c_5, c_{10} c_{11}	$u^{48} + u^{47} + \cdots + 2u + 1$
c_9, c_{12}	$u^{48} + 9u^{47} + \cdots + 48u + 17$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_9 c_{12}	$y^{48} + 25y^{47} + \cdots + 8984y + 289$
c_2, c_3, c_4 c_5, c_7, c_8 c_{10}, c_{11}	$y^{48} + 53y^{47} + \cdots + 8y + 1$