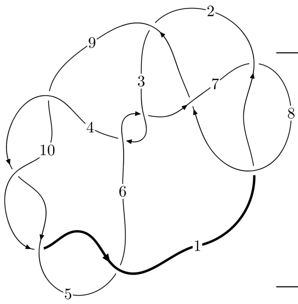
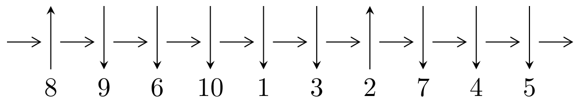
10_{14} $(K10a_{33})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{28} - u^{27} + \cdots - 2u - 1\rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 28 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. $I_1^u = \langle u^{28} - u^{27} + \cdots - 2u - 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^4 - 3u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^8 - 5u^6 + 7u^4 - 2u^2 + 1 \\ u^8 - 4u^6 + 4u^4 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^3 + 2u \\ u^5 - 3u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{12} - 7u^{10} + 17u^8 - 16u^6 + 6u^4 - 5u^2 + 1 \\ -u^{14} + 8u^{12} - 23u^{10} + 28u^8 - 14u^6 + 6u^4 - 3u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^{21} - 12u^{19} + \cdots - 8u^3 + 3u \\ u^{21} - 11u^{19} + \cdots - 3u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{26} + 60u^{24} - 384u^{22} - 4u^{21} + 1364u^{20} + 48u^{19} - 2940u^{18} - 236u^{17} + 4000u^{16} + 608u^{15} - 3604u^{14} - 884u^{13} + 2428u^{12} + 784u^{11} - 1376u^{10} - 560u^9 + 576u^8 + 384u^7 - 180u^6 - 148u^5 + 40u^4 + 52u^3 - 4u^2 - 16u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{28} - u^{27} + \cdots + u^2 - 1$
c_2	$u^{28} + u^{27} + \cdots - u - 2$
c_3, c_6	$u^{28} - 5u^{27} + \cdots + 20u - 7$
c_4, c_5, c_9 c_{10}	$u^{28} - u^{27} + \cdots - 2u - 1$
c_8	$u^{28} + 13u^{27} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{28} + 13y^{27} + \cdots - 2y + 1$
c_2	$y^{28} - 3y^{27} + \cdots - 109y + 4$
c_3, c_6	$y^{28} + 17y^{27} + \cdots + 118y + 49$
c_4, c_5, c_9 c_{10}	$y^{28} - 31y^{27} + \cdots - 2y + 1$
c_8	$y^{28} + 5y^{27} + \cdots - 26y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.586405 + 0.574893I$	$1.11175 + 8.20859I$	$-6.53568 - 8.40980I$
$u = -0.586405 - 0.574893I$	$1.11175 - 8.20859I$	$-6.53568 + 8.40980I$
$u = 0.543996 + 0.566433I$	$3.04585 - 3.16640I$	$-3.13756 + 4.02500I$
$u = 0.543996 - 0.566433I$	$3.04585 + 3.16640I$	$-3.13756 - 4.02500I$
$u = 0.755212 + 0.133146I$	$-3.40408 - 3.35246I$	$-13.3032 + 5.3092I$
$u = 0.755212 - 0.133146I$	$-3.40408 + 3.35246I$	$-13.3032 - 5.3092I$
$u = 0.430218 + 0.577744I$	$3.38107 - 0.75823I$	$-1.91828 + 3.18448I$
$u = 0.430218 - 0.577744I$	$3.38107 + 0.75823I$	$-1.91828 - 3.18448I$
$u = -0.567490 + 0.434707I$	$-1.58402 + 1.32970I$	$-10.44616 - 3.85928I$
$u = -0.567490 - 0.434707I$	$-1.58402 - 1.32970I$	$-10.44616 + 3.85928I$
$u = -0.376046 + 0.601172I$	$1.72778 - 4.19313I$	$-4.61655 + 2.23475I$
$u = -0.376046 - 0.601172I$	$1.72778 + 4.19313I$	$-4.61655 - 2.23475I$
$u = -0.561801$	-0.921591	-10.5330
$u = 1.45325 + 0.12481I$	$-4.10153 + 1.71282I$	$-8.00356 - 2.41214I$
$u = 1.45325 - 0.12481I$	$-4.10153 - 1.71282I$	$-8.00356 + 2.41214I$
$u = -1.48911 + 0.14533I$	$-2.88101 + 3.25978I$	$-6.00000 - 3.24223I$
$u = -1.48911 - 0.14533I$	$-2.88101 - 3.25978I$	$-6.00000 + 3.24223I$
$u = -1.54219 + 0.16548I$	$-3.89171 + 5.80125I$	$-6.94144 - 3.19136I$
$u = -1.54219 - 0.16548I$	$-3.89171 - 5.80125I$	$-6.94144 + 3.19136I$
$u = -0.144411 + 0.424497I$	$-0.54493 + 1.50370I$	$-4.95413 - 4.12502I$
$u = -0.144411 - 0.424497I$	$-0.54493 - 1.50370I$	$-4.95413 + 4.12502I$
$u = 1.55614 + 0.12966I$	$-8.73279 - 3.39810I$	$-13.35777 + 1.97434I$
$u = 1.55614 - 0.12966I$	$-8.73279 + 3.39810I$	$-13.35777 - 1.97434I$
$u = 1.56158$	-8.21476	-10.3100
$u = 1.55803 + 0.17307I$	$-6.03932 - 10.93770I$	$-10.01109 + 7.20566I$
$u = 1.55803 - 0.17307I$	$-6.03932 + 10.93770I$	$-10.01109 - 7.20566I$
$u = -1.59109 + 0.02596I$	$-11.35240 + 3.87127I$	$-14.4294 - 3.8096I$
$u = -1.59109 - 0.02596I$	$-11.35240 - 3.87127I$	$-14.4294 + 3.8096I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{28} - u^{27} + \cdots + u^2 - 1$
c_2	$u^{28} + u^{27} + \cdots - u - 2$
c_3, c_6	$u^{28} - 5u^{27} + \cdots + 20u - 7$
c_4, c_5, c_9 c_{10}	$u^{28} - u^{27} + \cdots - 2u - 1$
c_8	$u^{28} + 13u^{27} + \cdots - 2u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{28} + 13y^{27} + \cdots - 2y + 1$
c_2	$y^{28} - 3y^{27} + \cdots - 109y + 4$
c_3, c_6	$y^{28} + 17y^{27} + \cdots + 118y + 49$
c_4, c_5, c_9 c_{10}	$y^{28} - 31y^{27} + \cdots - 2y + 1$
c_8	$y^{28} + 5y^{27} + \cdots - 26y + 1$