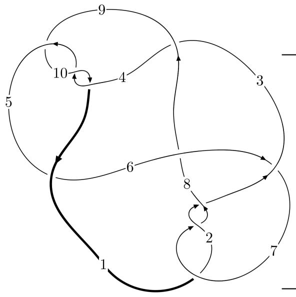
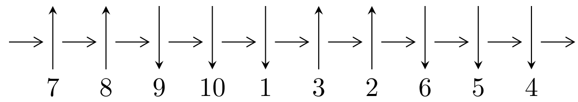
10_{26} $(K10a_{111})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{30} + u^{29} + \cdots - u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 30 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. $I_1^u = \langle u^{30} + u^{29} + \cdots - u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^3 - 2u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^7 + 4u^5 - 4u^3 \\ u^7 - 3u^5 + 2u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{14} + 7u^{12} - 18u^{10} + 19u^8 - 4u^6 - 4u^4 + 1 \\ u^{14} - 6u^{12} + 13u^{10} - 10u^8 - 2u^6 + 4u^4 + u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^9 + 4u^7 - 5u^5 + 2u^3 - u \\ -u^{11} + 5u^9 - 8u^7 + 3u^5 + u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{27} + 12u^{25} + \cdots + 10u^5 - 5u^3 \\ -u^{29} + 13u^{27} + \cdots + 3u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{28} + 52u^{26} - 4u^{25} - 292u^{24} + 48u^{23} + 912u^{22} - 244u^{21} - 1684u^{20} + 672u^{19} + 1752u^{18} - 1056u^{17} - 752u^{16} + 896u^{15} - 212u^{14} - 332u^{13} + 180u^{12} + 64u^{11} + 156u^{10} - 112u^9 - 96u^8 + 64u^7 - 20u^6 - 8u^5 + 8u^4 + 20u^3 - 12u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7	$u^{30} + u^{29} + \cdots - u + 1$
c_3, c_5	$u^{30} - u^{29} + \cdots - 5u + 5$
c_4, c_9, c_{10}	$u^{30} + u^{29} + \cdots + u + 1$
c_6	$u^{30} - 3u^{29} + \cdots - u + 1$
c_8	$u^{30} - 7u^{29} + \cdots - 39u + 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7	$y^{30} - 27y^{29} + \cdots + 3y + 1$
c_3, c_5	$y^{30} - 19y^{29} + \cdots + 115y + 25$
c_4, c_9, c_{10}	$y^{30} + 25y^{29} + \cdots + 3y + 1$
c_6	$y^{30} + y^{29} + \cdots - y + 1$
c_8	$y^{30} + 5y^{29} + \cdots + 383y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.006930 + 0.206480I$	$1.56161 + 3.89629I$	$-0.45772 - 4.15365I$
$u = 1.006930 - 0.206480I$	$1.56161 - 3.89629I$	$-0.45772 + 4.15365I$
$u = -0.832034 + 0.169903I$	$-2.20811 + 0.02948I$	$-4.37202 + 0.47071I$
$u = -0.832034 - 0.169903I$	$-2.20811 - 0.02948I$	$-4.37202 - 0.47071I$
$u = 0.266850 + 0.721202I$	$0.29816 + 7.69168I$	$-2.03043 - 6.90287I$
$u = 0.266850 - 0.721202I$	$0.29816 - 7.69168I$	$-2.03043 + 6.90287I$
$u = 0.703536 + 0.310326I$	$1.91248 - 3.85600I$	$0.77500 + 2.05029I$
$u = 0.703536 - 0.310326I$	$1.91248 + 3.85600I$	$0.77500 - 2.05029I$
$u = -0.228391 + 0.710789I$	$-4.18456 - 3.64220I$	$-7.10429 + 4.72167I$
$u = -0.228391 - 0.710789I$	$-4.18456 + 3.64220I$	$-7.10429 - 4.72167I$
$u = 0.169829 + 0.699155I$	$-0.939054 - 0.373325I$	$-4.20674 - 0.53471I$
$u = 0.169829 - 0.699155I$	$-0.939054 + 0.373325I$	$-4.20674 + 0.53471I$
$u = -0.379833 + 0.540597I$	$5.15123 - 1.73295I$	$3.31181 + 4.09879I$
$u = -0.379833 - 0.540597I$	$5.15123 + 1.73295I$	$3.31181 - 4.09879I$
$u = 1.351750 + 0.104838I$	$3.53116 + 0.39832I$	$-0.06522 + 1.62643I$
$u = 1.351750 - 0.104838I$	$3.53116 - 0.39832I$	$-0.06522 - 1.62643I$
$u = -1.363600 + 0.194579I$	$4.77317 - 3.51597I$	$2.79512 + 5.12276I$
$u = -1.363600 - 0.194579I$	$4.77317 + 3.51597I$	$2.79512 - 5.12276I$
$u = -1.360050 + 0.270550I$	$3.89598 - 3.12979I$	$0.91872 + 1.86186I$
$u = -1.360050 - 0.270550I$	$3.89598 + 3.12979I$	$0.91872 - 1.86186I$
$u = 1.39028 + 0.28253I$	$0.96260 + 7.24749I$	$-2.00000 - 5.63452I$
$u = 1.39028 - 0.28253I$	$0.96260 - 7.24749I$	$-2.00000 + 5.63452I$
$u = -1.42059 + 0.09196I$	$8.32515 + 2.69486I$	$5.41344 - 2.42783I$
$u = -1.42059 - 0.09196I$	$8.32515 - 2.69486I$	$5.41344 + 2.42783I$
$u = -1.40881 + 0.28598I$	$5.64069 - 11.35200I$	$2.55345 + 7.31316I$
$u = -1.40881 - 0.28598I$	$5.64069 + 11.35200I$	$2.55345 - 7.31316I$
$u = 1.42434 + 0.20546I$	$10.89310 + 4.47665I$	$7.02629 - 3.57345I$
$u = 1.42434 - 0.20546I$	$10.89310 - 4.47665I$	$7.02629 + 3.57345I$
$u = 0.179795 + 0.471439I$	$-0.135164 + 0.995104I$	$-2.48606 - 6.82295I$
$u = 0.179795 - 0.471439I$	$-0.135164 - 0.995104I$	$-2.48606 + 6.82295I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7	$u^{30} + u^{29} + \cdots - u + 1$
c_3, c_5	$u^{30} - u^{29} + \cdots - 5u + 5$
c_4, c_9, c_{10}	$u^{30} + u^{29} + \cdots + u + 1$
c_6	$u^{30} - 3u^{29} + \cdots - u + 1$
c_8	$u^{30} - 7u^{29} + \cdots - 39u + 7$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7	$y^{30} - 27y^{29} + \cdots + 3y + 1$
c_3, c_5	$y^{30} - 19y^{29} + \cdots + 115y + 25$
c_4, c_9, c_{10}	$y^{30} + 25y^{29} + \cdots + 3y + 1$
c_6	$y^{30} + y^{29} + \cdots - y + 1$
c_8	$y^{30} + 5y^{29} + \cdots + 383y + 49$