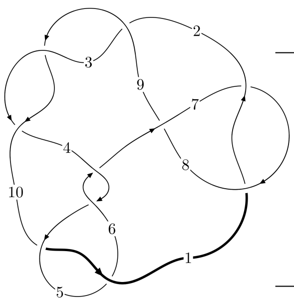
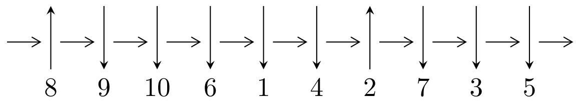
10_{39} ($K10a_{26}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

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

* 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

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^5 - u \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^5 + u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{10} + u^8 - 2u^6 + u^4 - u^2 + 1 \\ -u^{10} + 2u^8 - 3u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{15} + 2u^{13} - 4u^{11} + 4u^9 - 4u^7 + 4u^5 - 2u^3 + 2u \\ -u^{15} + 3u^{13} - 6u^{11} + 7u^9 - 6u^7 + 4u^5 - 2u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{22} - 3u^{20} + \cdots - 3u^4 + 1 \\ u^{24} - 4u^{22} + \cdots + 8u^4 - 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{28} + 20u^{26} - 4u^{25} - 64u^{24} + 16u^{23} + 140u^{22} - 48u^{21} - 236u^{20} + 96u^{19} + 320u^{18} - 156u^{17} - 356u^{16} + 208u^{15} + 340u^{14} - 228u^{13} - 272u^{12} + 220u^{11} + 188u^{10} - 168u^9 - 108u^8 + 116u^7 + 48u^6 - 64u^5 - 20u^4 + 28u^3 + 4u^2 - 8u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{30} - u^{29} + \cdots - u - 1$
c_2, c_3, c_9	$u^{30} + u^{29} + \cdots + 7u - 1$
c_4, c_6	$u^{30} + 11u^{29} + \cdots + u + 1$
c_5, c_{10}	$u^{30} - u^{29} + \cdots - u - 1$
c_8	$u^{30} + 17u^{29} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{30} + 17y^{29} + \cdots - y + 1$
c_2, c_3, c_9	$y^{30} - 31y^{29} + \cdots - 49y + 1$
c_4, c_6	$y^{30} + 17y^{29} + \cdots + 7y + 1$
c_5, c_{10}	$y^{30} - 11y^{29} + \cdots - y + 1$
c_8	$y^{30} - 7y^{29} + \cdots - 25y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.730327 + 0.712584I$	$1.67645 - 2.06909I$	$-4.15841 + 3.38718I$
$u = -0.730327 - 0.712584I$	$1.67645 + 2.06909I$	$-4.15841 - 3.38718I$
$u = \quad 0.551518 + 0.799916I$	$-5.35554 + 6.07028I$	$-8.34155 - 3.40396I$
$u = \quad 0.551518 - 0.799916I$	$-5.35554 - 6.07028I$	$-8.34155 + 3.40396I$
$u = -0.906793 + 0.533130I$	$-1.75153 + 2.04857I$	$-11.94351 - 2.92796I$
$u = -0.906793 - 0.533130I$	$-1.75153 - 2.04857I$	$-11.94351 + 2.92796I$
$u = \quad 0.804216 + 0.685158I$	$2.71504 - 2.05267I$	$-1.58203 + 3.48780I$
$u = \quad 0.804216 - 0.685158I$	$2.71504 + 2.05267I$	$-1.58203 - 3.48780I$
$u = \quad 0.924638 + 0.148092I$	$-3.63670 - 2.97945I$	$-13.9208 + 5.3409I$
$u = \quad 0.924638 - 0.148092I$	$-3.63670 + 2.97945I$	$-13.9208 - 5.3409I$
$u = -0.543400 + 0.758728I$	$-1.94581 - 1.35458I$	$-5.23413 + 0.23076I$
$u = -0.543400 - 0.758728I$	$-1.94581 + 1.35458I$	$-5.23413 - 0.23076I$
$u = \quad 0.488569 + 0.765822I$	$-5.74978 - 2.99724I$	$-8.94829 + 3.11480I$
$u = \quad 0.488569 - 0.765822I$	$-5.74978 + 2.99724I$	$-8.94829 - 3.11480I$
$u = \quad 0.897290 + 0.672452I$	$2.42981 - 3.18388I$	$-2.48294 + 3.33039I$
$u = \quad 0.897290 - 0.672452I$	$2.42981 + 3.18388I$	$-2.48294 - 3.33039I$
$u = \quad 1.12154$	-7.57426	-11.4920
$u = -1.139570 + 0.022635I$	$-11.30750 + 4.69703I$	$-14.6642 - 3.2976I$
$u = -1.139570 - 0.022635I$	$-11.30750 - 4.69703I$	$-14.6642 + 3.2976I$
$u = -0.950905 + 0.682953I$	$1.01456 + 7.42449I$	$-6.02063 - 8.82247I$
$u = -0.950905 - 0.682953I$	$1.01456 - 7.42449I$	$-6.02063 + 8.82247I$
$u = -1.047270 + 0.654174I$	$-3.41555 + 6.72016I$	$-7.40084 - 4.93754I$
$u = -1.047270 - 0.654174I$	$-3.41555 - 6.72016I$	$-7.40084 + 4.93754I$
$u = \quad 1.060070 + 0.635598I$	$-7.40758 - 2.28828I$	$-11.38974 + 1.78470I$
$u = \quad 1.060070 - 0.635598I$	$-7.40758 + 2.28828I$	$-11.38974 - 1.78470I$
$u = \quad 1.059080 + 0.667496I$	$-6.86248 - 11.58950I$	$-10.39391 + 7.89908I$
$u = \quad 1.059080 - 0.667496I$	$-6.86248 + 11.58950I$	$-10.39391 - 7.89908I$
$u = -0.704437$	-1.05262	-9.30020
$u = -0.175683 + 0.414203I$	$-0.50312 + 1.32269I$	$-5.12281 - 4.79072I$
$u = -0.175683 - 0.414203I$	$-0.50312 - 1.32269I$	$-5.12281 + 4.79072I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{30} - u^{29} + \cdots - u - 1$
c_2, c_3, c_9	$u^{30} + u^{29} + \cdots + 7u - 1$
c_4, c_6	$u^{30} + 11u^{29} + \cdots + u + 1$
c_5, c_{10}	$u^{30} - u^{29} + \cdots - u - 1$
c_8	$u^{30} + 17u^{29} + \cdots - u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{30} + 17y^{29} + \cdots - y + 1$
c_2, c_3, c_9	$y^{30} - 31y^{29} + \cdots - 49y + 1$
c_4, c_6	$y^{30} + 17y^{29} + \cdots + 7y + 1$
c_5, c_{10}	$y^{30} - 11y^{29} + \cdots - y + 1$
c_8	$y^{30} - 7y^{29} + \cdots - 25y + 1$