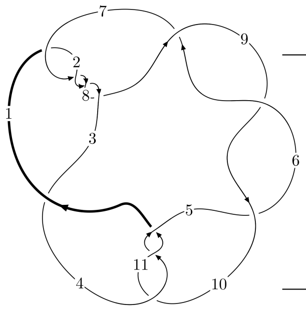
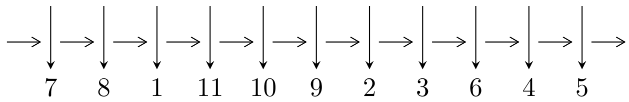
$11a_{339}$ ($K11a_{339}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{27} - u^{26} + \cdots - 2u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 27 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. $I_1^u = \langle u^{27} - u^{26} + \cdots - 2u + 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^3 - 2u \\ -u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^5 - 2u^3 + u \\ u^7 - 3u^5 + 2u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^6 - 3u^4 + 2u^2 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^9 - 4u^7 + 5u^5 - 3u \\ -u^9 + 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{18} + 7u^{16} - 20u^{14} + 27u^{12} - 11u^{10} - 13u^8 + 16u^6 - 6u^4 + u^2 + 1 \\ -u^{20} + 8u^{18} - 26u^{16} + 40u^{14} - 19u^{12} - 24u^{10} + 30u^8 - 2u^6 - 5u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{22} - 9u^{20} + \cdots - 4u^2 + 1 \\ -u^{22} + 8u^{20} + \cdots + 4u^4 + 3u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{22} - 9u^{20} + \cdots - 4u^2 + 1 \\ -u^{22} + 8u^{20} + \cdots + 4u^4 + 3u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $=$
$-4u^{24}+36u^{22}+4u^{21}-140u^{20}-32u^{19}+284u^{18}+108u^{17}-256u^{16}-180u^{15}-96u^{14}+104u^{13}+440u^{12}+120u^{11}-296u^{10}-216u^9-112u^8+56u^7+192u^6+80u^5-16u^4-36u^3-32u^2-8u-14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8	$u^{27} + u^{26} + \cdots - 2u - 1$
c_3, c_5, c_6 c_9	$u^{27} - 3u^{26} + \cdots + 4u - 1$
c_4, c_{10}, c_{11}	$u^{27} + u^{26} + \cdots - 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8	$y^{27} - 29y^{26} + \cdots + 10y - 1$
c_3, c_5, c_6 c_9	$y^{27} + 31y^{26} + \cdots + 22y - 1$
c_4, c_{10}, c_{11}	$y^{27} - 21y^{26} + \cdots + 10y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.013123 + 0.894482I$	$9.43523 - 2.24680I$	$-6.17904 + 3.02780I$
$u = 0.013123 - 0.894482I$	$9.43523 + 2.24680I$	$-6.17904 - 3.02780I$
$u = -0.041452 + 0.892930I$	$2.82267 + 5.43200I$	$-9.64025 - 3.04274I$
$u = -0.041452 - 0.892930I$	$2.82267 - 5.43200I$	$-9.64025 + 3.04274I$
$u = 1.162550 + 0.167516I$	$-1.60577 - 1.16599I$	$-9.70330 + 0.15957I$
$u = 1.162550 - 0.167516I$	$-1.60577 + 1.16599I$	$-9.70330 - 0.15957I$
$u = -0.781754 + 0.091734I$	$-6.68333 - 0.00498I$	$-14.6673 - 0.4486I$
$u = -0.781754 - 0.091734I$	$-6.68333 + 0.00498I$	$-14.6673 + 0.4486I$
$u = -1.25317$	-4.90599	-20.0000
$u = -1.255670 + 0.210110I$	$-2.66095 + 4.20438I$	$-14.1782 - 7.6940I$
$u = -1.255670 - 0.210110I$	$-2.66095 - 4.20438I$	$-14.1782 + 7.6940I$
$u = -1.243220 + 0.434957I$	$-0.891189 - 0.687706I$	$-12.83371 - 0.18639I$
$u = -1.243220 - 0.434957I$	$-0.891189 + 0.687706I$	$-12.83371 + 0.18639I$
$u = 1.33611$	-12.4088	-20.5520
$u = 1.319890 + 0.213766I$	$-9.80481 - 5.99282I$	$-17.3414 + 5.5228I$
$u = 1.319890 - 0.213766I$	$-9.80481 + 5.99282I$	$-17.3414 - 5.5228I$
$u = 1.269780 + 0.428859I$	$5.53802 - 2.48385I$	$-9.46346 + 0.15279I$
$u = 1.269780 - 0.428859I$	$5.53802 + 2.48385I$	$-9.46346 - 0.15279I$
$u = -1.290860 + 0.422984I$	$5.37877 + 6.95944I$	$-9.93623 - 6.05202I$
$u = -1.290860 - 0.422984I$	$5.37877 - 6.95944I$	$-9.93623 + 6.05202I$
$u = -0.232231 + 0.591655I$	$-4.98362 + 3.14884I$	$-11.41725 - 4.81307I$
$u = -0.232231 - 0.591655I$	$-4.98362 - 3.14884I$	$-11.41725 + 4.81307I$
$u = 1.310480 + 0.415835I$	$-1.39565 - 10.11710I$	$-13.4570 + 5.7483I$
$u = 1.310480 - 0.415835I$	$-1.39565 + 10.11710I$	$-13.4570 - 5.7483I$
$u = 0.090324 + 0.551346I$	$1.43201 - 1.45915I$	$-6.27932 + 5.94435I$
$u = 0.090324 - 0.551346I$	$1.43201 + 1.45915I$	$-6.27932 - 5.94435I$
$u = 0.275134$	-0.522013	-19.2550

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8	$u^{27} + u^{26} + \cdots - 2u - 1$
c_3, c_5, c_6 c_9	$u^{27} - 3u^{26} + \cdots + 4u - 1$
c_4, c_{10}, c_{11}	$u^{27} + u^{26} + \cdots - 2u - 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8	$y^{27} - 29y^{26} + \cdots + 10y - 1$
c_3, c_5, c_6 c_9	$y^{27} + 31y^{26} + \cdots + 22y - 1$
c_4, c_{10}, c_{11}	$y^{27} - 21y^{26} + \cdots + 10y - 1$