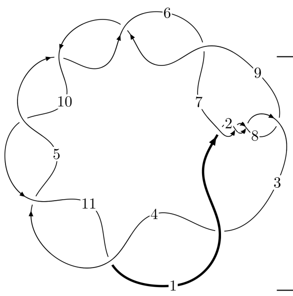
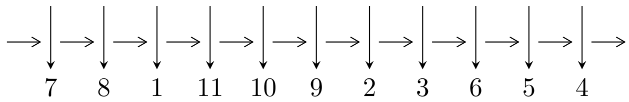
$11a_{342}$ ($K11a_{342}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{14} - u^{13} + 11u^{12} - 10u^{11} + 46u^{10} - 37u^9 + 91u^8 - 62u^7 + 86u^6 - 46u^5 + 34u^4 - 12u^3 + 4u^2 - u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 14 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. $\boldsymbol{I_1^u = \langle u^{14} - u^{13} + 11u^{12} - 10u^{11} + 46u^{10} - 37u^9 + 91u^8 - 62u^7 + 86u^6 - 46u^5 + 34u^4 - 12u^3 + 4u^2 - u - 1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 + 2u \\ u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^4 + 3u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^9 + 6u^7 + 11u^5 + 8u^3 + 3u \\ -u^{11} - 7u^9 - 16u^7 - 13u^5 - u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{11} - 8u^9 - 22u^7 - 24u^5 - 9u^3 - 2u \\ -u^{11} - 7u^9 - 16u^7 - 13u^5 - u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{11} - 8u^9 - 22u^7 - 24u^5 - 9u^3 - 2u \\ -u^{11} - 7u^9 - 16u^7 - 13u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $=$
$-4u^{12}+4u^{11}-40u^{10}+36u^9-148u^8+116u^7-248u^6+160u^5-184u^4+88u^3-48u^2+12u-10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8	$u^{14} + u^{13} + \cdots - u - 1$
c_3, c_4, c_5 c_6, c_9, c_{10} c_{11}	$u^{14} - u^{13} + \cdots - u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8	$y^{14} - 15y^{13} + \cdots - 9y + 1$
c_3, c_4, c_5 c_6, c_9, c_{10} c_{11}	$y^{14} + 21y^{13} + \cdots - 9y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \;\; 0.381730 + 0.625511I$	$-4.92622 - 2.93973I$	$-10.63366 + 4.87049I$
$u = \;\; 0.381730 - 0.625511I$	$-4.92622 + 2.93973I$	$-10.63366 - 4.87049I$
$u = \;\; 0.168472 + 1.304890I$	$1.39190 - 4.86264I$	$-8.09843 + 3.43305I$
$u = \;\; 0.168472 - 1.304890I$	$1.39190 + 4.86264I$	$-8.09843 - 3.43305I$
$u = -0.055653 + 1.326060I$	$7.86080 + 2.05217I$	$-4.38288 - 3.48878I$
$u = -0.055653 - 1.326060I$	$7.86080 - 2.05217I$	$-4.38288 + 3.48878I$
$u = -0.146994 + 0.629165I$	$1.33933 + 1.36693I$	$-5.43833 - 6.34895I$
$u = -0.146994 - 0.629165I$	$1.33933 - 1.36693I$	$-5.43833 + 6.34895I$
$u = \;\; 0.510750$	-6.81823	-15.6260
$u = -0.261519$	-0.527184	-19.1440
$u = \;\; 0.04100 + 1.81566I$	$12.9478 - 5.8388I$	$-7.65915 + 2.72028I$
$u = \;\; 0.04100 - 1.81566I$	$12.9478 + 5.8388I$	$-7.65915 - 2.72028I$
$u = -0.01317 + 1.82219I$	$19.6027 + 2.3762I$	$-4.40255 - 2.72640I$
$u = -0.01317 - 1.82219I$	$19.6027 - 2.3762I$	$-4.40255 + 2.72640I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8	$u^{14} + u^{13} + \cdots - u - 1$
c_3, c_4, c_5 c_6, c_9, c_{10} c_{11}	$u^{14} - u^{13} + \cdots - u - 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8	$y^{14} - 15y^{13} + \cdots - 9y + 1$
c_3, c_4, c_5 c_6, c_9, c_{10} c_{11}	$y^{14} + 21y^{13} + \cdots - 9y + 1$