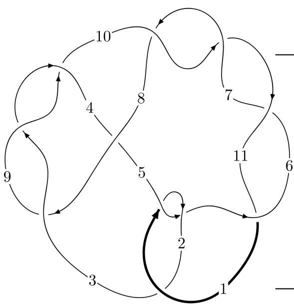
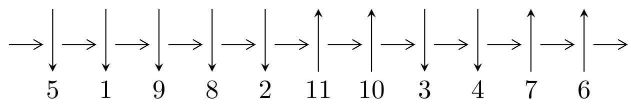
$11a_{140}$ $(K11a_{140})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{32} + u^{31} + \cdots - 2u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 32 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. $I_1^u = \langle u^{32} + u^{31} + \cdots - 2u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^9 - 2u^7 + u^5 + 2u^3 - u \\ -u^9 + 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{12} - 3u^{10} + 3u^8 + 2u^6 - 4u^4 + u^2 + 1 \\ -u^{12} + 4u^{10} - 6u^8 + 2u^6 + 3u^4 - 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{20} + 5u^{18} - 11u^{16} + 10u^{14} + 2u^{12} - 13u^{10} + 9u^8 + 2u^6 - 5u^4 + u^2 + 1 \\ u^{22} - 6u^{20} + 17u^{18} - 26u^{16} + 20u^{14} - 13u^{10} + 10u^8 - 3u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{26} + 7u^{24} + \cdots + u^2 + 1 \\ u^{26} - 8u^{24} + \cdots - 2u^4 - u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{26} + 7u^{24} + \cdots + u^2 + 1 \\ u^{26} - 8u^{24} + \cdots - 2u^4 - u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= 4u^{31} - 40u^{29} - 4u^{28} + 184u^{27} + 36u^{26} - 484u^{25} - 148u^{24} + 728u^{23} + 340u^{22} - 420u^{21} - 420u^{20} - 556u^{19} + 116u^{18} + 1316u^{17} + 444u^{16} - 872u^{15} - 652u^{14} - 292u^{13} + 236u^{12} + 772u^{11} + 244u^{10} - 316u^9 - 260u^8 - 124u^7 + 36u^6 + 116u^5 + 44u^4 - 4u^3 - 12u^2 - 12u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{32} + u^{31} + \cdots - 2u - 1$
c_2	$u^{32} + 19u^{31} + \cdots - 8u^2 + 1$
c_3, c_8, c_9	$u^{32} - u^{31} + \cdots - 2u - 1$
c_4	$u^{32} + 3u^{31} + \cdots + 202u + 77$
c_6, c_7, c_{10} c_{11}	$u^{32} + 3u^{31} + \cdots + 16u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{32} - 19y^{31} + \cdots - 8y^2 + 1$
c_2	$y^{32} - 11y^{31} + \cdots - 16y + 1$
c_3, c_8, c_9	$y^{32} - 31y^{31} + \cdots - 16y^2 + 1$
c_4	$y^{32} - 19y^{31} + \cdots - 95320y + 5929$
c_6, c_7, c_{10} c_{11}	$y^{32} + 41y^{31} + \cdots - 112y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.868634+0.432115I$	$-3.34862+4.04370I$	$-6.04453-7.13519I$
$u=-0.868634-0.432115I$	$-3.34862-4.04370I$	$-6.04453+7.13519I$
$u=\ \ 1.04533$	-6.54630	-13.9220
$u=-0.026700+0.917936I$	$-14.7670-5.6087I$	$-9.35181+2.83991I$
$u=-0.026700-0.917936I$	$-14.7670+5.6087I$	$-9.35181-2.83991I$
$u=\ \ 0.012118+0.901786I$	$-8.30499+2.26267I$	$-6.08064-2.91656I$
$u=\ \ 0.012118-0.901786I$	$-8.30499-2.26267I$	$-6.08064+2.91656I$
$u=-1.083140+0.341712I$	$-3.37831+1.66824I$	$-9.56243-0.35146I$
$u=-1.083140-0.341712I$	$-3.37831-1.66824I$	$-9.56243+0.35146I$
$u=\ \ 1.076920+0.423315I$	$-2.77345-5.10982I$	$-6.71803+8.18202I$
$u=\ \ 1.076920-0.423315I$	$-2.77345+5.10982I$	$-6.71803-8.18202I$
$u=\ \ 0.756512+0.350926I$	$0.83897-1.64134I$	$1.45053+5.73960I$
$u=\ \ 0.756512-0.350926I$	$0.83897+1.64134I$	$1.45053-5.73960I$
$u=-0.804096$	-1.07276	-10.5910
$u=\ \ 1.157410+0.314330I$	$-9.45578+0.50238I$	$-13.25888+0.22265I$
$u=\ \ 1.157410-0.314330I$	$-9.45578-0.50238I$	$-13.25888-0.22265I$
$u=-1.110460+0.463462I$	$-8.33031+8.05747I$	$-10.74797-7.46464I$
$u=-1.110460-0.463462I$	$-8.33031-8.05747I$	$-10.74797+7.46464I$
$u=-0.163704+0.669811I$	$-5.64755-3.79286I$	$-7.65510+3.79891I$
$u=-0.163704-0.669811I$	$-5.64755+3.79286I$	$-7.65510-3.79891I$
$u=-0.522402+0.426932I$	$-2.44365-0.31845I$	$-3.24811-0.20471I$
$u=-0.522402-0.426932I$	$-2.44365+0.31845I$	$-3.24811+0.20471I$
$u=-1.267860+0.464164I$	$-12.21500+2.58352I$	$-9.43681-0.14752I$
$u=-1.267860-0.464164I$	$-12.21500-2.58352I$	$-9.43681+0.14752I$
$u=\ \ 1.263650+0.477439I$	$-12.11660-7.17755I$	$-9.14770+5.86389I$
$u=\ \ 1.263650-0.477439I$	$-12.11660+7.17755I$	$-9.14770-5.86389I$
$u=-1.268830+0.488464I$	$-18.5604+10.6275I$	$-12.35486-5.78214I$
$u=-1.268830-0.488464I$	$-18.5604-10.6275I$	$-12.35486+5.78214I$
$u=\ \ 1.280210+0.458189I$	$-18.7882+0.7378I$	$-12.72584+0.13438I$
$u=\ \ 1.280210-0.458189I$	$-18.7882-0.7378I$	$-12.72584-0.13438I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.144298+0.527794I$	$-0.269618+1.333490I$	$-2.86164-5.19756I$
$u=$	$0.144298-0.527794I$	$-0.269618-1.333490I$	$-2.86164+5.19756I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{32} + u^{31} + \cdots - 2u - 1$
c_2	$u^{32} + 19u^{31} + \cdots - 8u^2 + 1$
c_3, c_8, c_9	$u^{32} - u^{31} + \cdots - 2u - 1$
c_4	$u^{32} + 3u^{31} + \cdots + 202u + 77$
c_6, c_7, c_{10} c_{11}	$u^{32} + 3u^{31} + \cdots + 16u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{32} - 19y^{31} + \cdots - 8y^2 + 1$
c_2	$y^{32} - 11y^{31} + \cdots - 16y + 1$
c_3, c_8, c_9	$y^{32} - 31y^{31} + \cdots - 16y^2 + 1$
c_4	$y^{32} - 19y^{31} + \cdots - 95320y + 5929$
c_6, c_7, c_{10} c_{11}	$y^{32} + 41y^{31} + \cdots - 112y + 1$