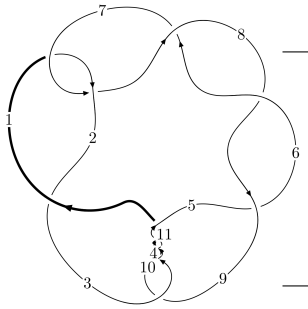
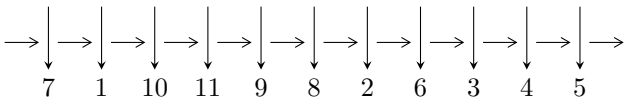
$11a_{242}$ $(K11a_{242})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$2,8 \underset{c_7}{\longrightarrow} 7 \underset{c_1}{\longrightarrow} 1 \underset{c_2}{\longrightarrow} 3 \underset{c_6}{\longrightarrow} 6 \underset{c_8}{\longrightarrow} 9 \underset{c_9}{\longrightarrow} 10 \underset{c_5}{\longrightarrow} 5 \underset{c_{11}}{\longrightarrow} 11 \underset{c_4}{\longrightarrow} 4 \gg c_3, c_{10}$$

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

$$I_1^u = \langle u^{23} + u^{22} + \cdots - 2u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 23 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. $I_1^u = \langle u^{23} + u^{22} + \cdots - 2u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^4 - u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^{12} + u^{10} - 3u^8 + 2u^6 - u^2 + 1 \\ u^{14} - 2u^{12} + 5u^{10} - 6u^8 + 6u^6 - 2u^4 + u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^6 + u^4 - 2u^2 + 1 \\ -u^6 - u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{15} + 2u^{13} - 6u^{11} + 8u^9 - 10u^7 + 8u^5 - 4u^3 + 2u \\ -u^{15} + u^{13} - 4u^{11} + 3u^9 - 4u^7 + 2u^5 - 2u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{21} - 2u^{19} + 7u^{17} - 10u^{15} + 14u^{13} - 12u^{11} + 5u^9 + 2u^7 - 5u^5 + 2u^3 - u \\ u^{22} + u^{21} + \cdots - u - 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{21} - 2u^{19} + 7u^{17} - 10u^{15} + 14u^{13} - 12u^{11} + 5u^9 + 2u^7 - 5u^5 + 2u^3 - u \\ u^{22} + u^{21} + \cdots - u - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$= 4u^{22} - 12u^{20} - 4u^{19} + 40u^{18} + 8u^{17} - 80u^{16} - 28u^{15} + 132u^{14} + 40u^{13} - 176u^{12} - 56u^{11} + 172u^{10} + 48u^9 - 144u^8 - 24u^7 + 80u^6 - 4u^5 - 44u^4 + 8u^3 + 16u^2 - 18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{23} + u^{22} + \cdots - 2u - 1$
c_2, c_5, c_6 c_8	$u^{23} + 5u^{22} + \cdots + 8u + 1$
c_3, c_4, c_9 c_{10}, c_{11}	$u^{23} + u^{22} + \cdots - 4u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{23} - 5y^{22} + \cdots + 8y - 1$
c_2, c_5, c_6 c_8	$y^{23} + 27y^{22} + \cdots + 4y - 1$
c_3, c_4, c_9 c_{10}, c_{11}	$y^{23} - 29y^{22} + \cdots + 8y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.870875+0.464972I$	$-1.83130+4.25551I$	$-14.9090-7.7889I$
$u=-0.870875-0.464972I$	$-1.83130-4.25551I$	$-14.9090+7.7889I$
$u=-0.971379$	-13.4466	-20.2820
$u=\ \ 0.958938+0.461987I$	$-10.82570-5.40102I$	$-16.2163+5.6771I$
$u=\ \ 0.958938-0.461987I$	$-10.82570+5.40102I$	$-16.2163-5.6771I$
$u=\ \ 0.717237+0.485490I$	$1.10748-1.87873I$	$-6.66063+5.68345I$
$u=\ \ 0.717237-0.485490I$	$1.10748+1.87873I$	$-6.66063-5.68345I$
$u=\ \ 0.861396$	-4.23946	-21.1260
$u=\ \ 0.362544+0.678780I$	$-8.93621+1.22135I$	$-11.90750-0.10584I$
$u=\ \ 0.362544-0.678780I$	$-8.93621-1.22135I$	$-11.90750+0.10584I$
$u=-0.861249+0.901922I$	$-1.94992-2.55399I$	$-11.84797+0.31976I$
$u=-0.861249-0.901922I$	$-1.94992+2.55399I$	$-11.84797-0.31976I$
$u=\ \ 0.890856+0.885729I$	$6.62290+0.44894I$	$-10.13262-1.46638I$
$u=\ \ 0.890856-0.885729I$	$6.62290-0.44894I$	$-10.13262+1.46638I$
$u=-0.921402+0.875942I$	$9.09276+3.24062I$	$-6.19152-2.55557I$
$u=-0.921402-0.875942I$	$9.09276-3.24062I$	$-6.19152+2.55557I$
$u=\ \ 0.947828+0.861357I$	$6.44204-6.91342I$	$-10.56964+6.26257I$
$u=\ \ 0.947828-0.861357I$	$6.44204+6.91342I$	$-10.56964-6.26257I$
$u=-0.973841+0.851585I$	$-2.30857+9.03328I$	$-12.45199-5.05219I$
$u=-0.973841-0.851585I$	$-2.30857-9.03328I$	$-12.45199+5.05219I$
$u=-0.457331+0.511324I$	$-0.602334-0.458552I$	$-11.06917+1.12837I$
$u=-0.457331-0.511324I$	$-0.602334+0.458552I$	$-11.06917-1.12837I$
$u=-0.475427$	-0.610128	-16.6790

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{23} + u^{22} + \cdots - 2u - 1$
c_2, c_5, c_6 c_8	$u^{23} + 5u^{22} + \cdots + 8u + 1$
c_3, c_4, c_9 c_{10}, c_{11}	$u^{23} + u^{22} + \cdots - 4u - 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{23} - 5y^{22} + \cdots + 8y - 1$
c_2, c_5, c_6 c_8	$y^{23} + 27y^{22} + \cdots + 4y - 1$
c_3, c_4, c_9 c_{10}, c_{11}	$y^{23} - 29y^{22} + \cdots + 8y - 1$