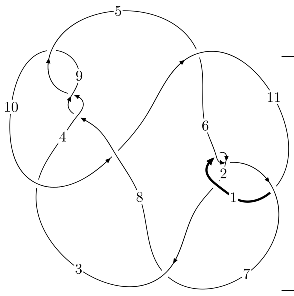
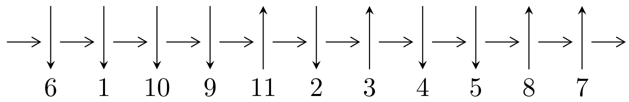
$11a_{176}$ ($K11a_{176}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{54} + 2u^{53} + \cdots - u + 1 \rangle$$
$$I_2^u = \langle u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 55 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. $I_1^u = \langle u^{54} + 2u^{53} + \cdots - u + 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^4 + u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{11} + 4u^9 - 4u^7 - 2u^5 + 3u^3 \\ -u^{11} + 5u^9 - 8u^7 + 3u^5 + u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^5 - 2u^3 + u \\ u^7 - 3u^5 + 2u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{12} - 5u^{10} + 9u^8 - 6u^6 + u^2 + 1 \\ u^{14} - 6u^{12} + 13u^{10} - 10u^8 - 2u^6 + 4u^4 + u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{30} - 13u^{28} + \cdots + 2u^2 + 1 \\ u^{32} - 14u^{30} + \cdots - 20u^8 + 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 2u^{53} + u^{52} + \cdots - u + 2 \\ 2u^{53} + 2u^{52} + \cdots - u + 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 2u^{53} + u^{52} + \cdots - u + 2 \\ 2u^{53} + 2u^{52} + \cdots - u + 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{53} + 96u^{51} + \cdots + 12u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{54} - 2u^{53} + \cdots - u + 1$
c_2	$u^{54} + 24u^{53} + \cdots - u + 1$
c_3	$u^{54} + 3u^{53} + \cdots + 13u + 5$
c_4, c_8, c_9	$u^{54} - 2u^{53} + \cdots + u + 1$
c_5, c_7	$u^{54} - 20u^{52} + \cdots - 23u + 1$
c_{10}	$u^{54} + 12u^{53} + \cdots + 297u + 23$
c_{11}	$u^{54} - 3u^{53} + \cdots + 11u + 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{54} - 24y^{53} + \cdots + y + 1$
c_2	$y^{54} + 12y^{53} + \cdots - 11y + 1$
c_3	$y^{54} + 3y^{53} + \cdots - 269y + 25$
c_4, c_8, c_9	$y^{54} - 48y^{53} + \cdots + y + 1$
c_5, c_7	$y^{54} - 40y^{53} + \cdots - 207y + 1$
c_{10}	$y^{54} + 8y^{53} + \cdots + 11749y + 529$
c_{11}	$y^{54} + 3y^{53} + \cdots + 1139y + 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.963853 + 0.239721I$	$1.70219 - 6.38060I$	$-2.45012 + 6.07310I$
$u = \ \ 0.963853 - 0.239721I$	$1.70219 + 6.38060I$	$-2.45012 - 6.07310I$
$u = -0.915784 + 0.228115I$	$3.41733 + 1.25909I$	$0.259004 - 1.112987I$
$u = -0.915784 - 0.228115I$	$3.41733 - 1.25909I$	$0.259004 + 1.112987I$
$u = -0.789465 + 0.267366I$	$3.26830 - 1.40826I$	$-0.268768 - 0.442670I$
$u = -0.789465 - 0.267366I$	$3.26830 + 1.40826I$	$-0.268768 + 0.442670I$
$u = \ \ 0.758491 + 0.308061I$	$1.40844 + 6.51845I$	$-3.38857 - 4.08750I$
$u = \ \ 0.758491 - 0.308061I$	$1.40844 - 6.51845I$	$-3.38857 + 4.08750I$
$u = \ \ 0.256667 + 0.732348I$	$3.15875 - 10.41640I$	$-0.77334 + 8.79469I$
$u = \ \ 0.256667 - 0.732348I$	$3.15875 + 10.41640I$	$-0.77334 - 8.79469I$
$u = -0.243755 + 0.728305I$	$5.12841 + 5.22917I$	$2.37428 - 4.44764I$
$u = -0.243755 - 0.728305I$	$5.12841 - 5.22917I$	$2.37428 + 4.44764I$
$u = -0.206060 + 0.723757I$	$5.62286 + 2.45822I$	$3.43259 - 3.89075I$
$u = -0.206060 - 0.723757I$	$5.62286 - 2.45822I$	$3.43259 + 3.89075I$
$u = \ \ 0.185877 + 0.724088I$	$4.07878 + 2.66694I$	$1.14279 - 1.40015I$
$u = \ \ 0.185877 - 0.724088I$	$4.07878 - 2.66694I$	$1.14279 + 1.40015I$
$u = \ \ 0.248073 + 0.690816I$	$0.11288 - 3.24680I$	$-3.97449 + 4.31964I$
$u = \ \ 0.248073 - 0.690816I$	$0.11288 + 3.24680I$	$-3.97449 - 4.31964I$
$u = \ \ 1.275390 + 0.130366I$	$-2.32233 - 0.58829I$	0
$u = \ \ 1.275390 - 0.130366I$	$-2.32233 + 0.58829I$	0
$u = -1.301090 + 0.201573I$	$-3.00640 + 4.83893I$	0
$u = -1.301090 - 0.201573I$	$-3.00640 - 4.83893I$	0
$u = -0.335824 + 0.569569I$	$-2.75425 + 5.16303I$	$-6.62576 - 8.31738I$
$u = -0.335824 - 0.569569I$	$-2.75425 - 5.16303I$	$-6.62576 + 8.31738I$
$u = -0.388647 + 0.474801I$	$-3.08098 - 1.83888I$	$-8.29710 + 0.16550I$
$u = -0.388647 - 0.474801I$	$-3.08098 + 1.83888I$	$-8.29710 - 0.16550I$
$u = \ \ 1.389140 + 0.067526I$	$-3.09355 + 0.76124I$	0
$u = \ \ 1.389140 - 0.067526I$	$-3.09355 - 0.76124I$	0
$u = -1.367000 + 0.288368I$	$-0.833592 + 0.995204I$	0
$u = -1.367000 - 0.288368I$	$-0.833592 - 0.995204I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.059975 + 0.594195I$	$1.20313 - 1.95407I$	$2.79385 + 4.45291I$
$u = \quad 0.059975 - 0.594195I$	$1.20313 + 1.95407I$	$2.79385 - 4.45291I$
$u = -1.400510 + 0.118575I$	$-7.31911 + 1.48659I$	0
$u = -1.400510 - 0.118575I$	$-7.31911 - 1.48659I$	0
$u = \quad 1.378690 + 0.289179I$	$0.59736 - 6.12710I$	0
$u = \quad 1.378690 - 0.289179I$	$0.59736 + 6.12710I$	0
$u = -1.396360 + 0.208440I$	$-5.56771 + 4.07219I$	0
$u = -1.396360 - 0.208440I$	$-5.56771 - 4.07219I$	0
$u = -1.41551 + 0.07207I$	$-5.12761 - 5.61169I$	0
$u = -1.41551 - 0.07207I$	$-5.12761 + 5.61169I$	0
$u = \quad 0.544247 + 0.205329I$	$-1.48527 - 0.15164I$	$-7.75648 + 0.91671I$
$u = \quad 0.544247 - 0.205329I$	$-1.48527 + 0.15164I$	$-7.75648 - 0.91671I$
$u = \quad 0.274528 + 0.511538I$	$-0.243608 - 1.371010I$	$-2.52596 + 5.06044I$
$u = \quad 0.274528 - 0.511538I$	$-0.243608 + 1.371010I$	$-2.52596 - 5.06044I$
$u = -1.39901 + 0.27445I$	$-5.13575 + 6.76281I$	0
$u = -1.39901 - 0.27445I$	$-5.13575 - 6.76281I$	0
$u = \quad 1.41497 + 0.18855I$	$-8.77151 - 0.63321I$	0
$u = \quad 1.41497 - 0.18855I$	$-8.77151 + 0.63321I$	0
$u = \quad 1.39845 + 0.29073I$	$-0.09729 - 8.92706I$	0
$u = \quad 1.39845 - 0.29073I$	$-0.09729 + 8.92706I$	0
$u = \quad 1.41558 + 0.21956I$	$-8.33472 - 8.06621I$	0
$u = \quad 1.41558 - 0.21956I$	$-8.33472 + 8.06621I$	0
$u = -1.40491 + 0.29196I$	$-2.1336 + 14.1348I$	0
$u = -1.40491 - 0.29196I$	$-2.1336 - 14.1348I$	0

II. $I_2^u = \langle u - 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_5, c_6, c_7 c_8, c_9, c_{10}	$y-1$
c_3, c_{11}	y

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	1.00000	−1.64493	−6.00000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u+1)(u^{54} - 2u^{53} + \cdots - u + 1)$
c_2	$(u+1)(u^{54} + 24u^{53} + \cdots - u + 1)$
c_3	$u(u^{54} + 3u^{53} + \cdots + 13u + 5)$
c_4, c_8, c_9	$(u+1)(u^{54} - 2u^{53} + \cdots + u + 1)$
c_5, c_7	$(u+1)(u^{54} - 20u^{52} + \cdots - 23u + 1)$
c_{10}	$(u+1)(u^{54} + 12u^{53} + \cdots + 297u + 23)$
c_{11}	$u(u^{54} - 3u^{53} + \cdots + 11u + 5)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y-1)(y^{54} - 24y^{53} + \cdots + y + 1)$
c_2	$(y-1)(y^{54} + 12y^{53} + \cdots - 11y + 1)$
c_3	$y(y^{54} + 3y^{53} + \cdots - 269y + 25)$
c_4, c_8, c_9	$(y-1)(y^{54} - 48y^{53} + \cdots + y + 1)$
c_5, c_7	$(y-1)(y^{54} - 40y^{53} + \cdots - 207y + 1)$
c_{10}	$(y-1)(y^{54} + 8y^{53} + \cdots + 11749y + 529)$
c_{11}	$y(y^{54} + 3y^{53} + \cdots + 1139y + 25)$