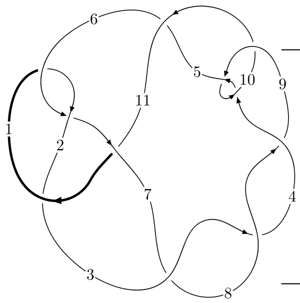
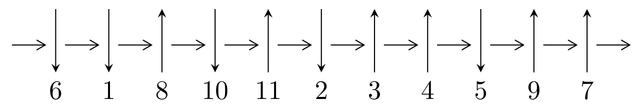
$11a_{174}$ ($K11a_{174}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{39} - u^{38} + \cdots + 2u^3 - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 39 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. $I_1^u = \langle u^{39} - u^{38} + \cdots + 2u^3 - 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^6 - u^4 + 1 \\ -u^8 - 2u^6 - 2u^4 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^6 - u^4 + 1 \\ u^6 + 2u^4 + u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^9 + 2u^7 + u^5 - 2u^3 - u \\ -u^9 - 3u^7 - 3u^5 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^{23} + 6u^{21} + \cdots + 6u^5 + 2u^3 \\ -u^{23} - 7u^{21} + \cdots - 3u^5 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{37} + 10u^{35} + \cdots + 2u^3 - u \\ u^{38} - u^{37} + \cdots + u + 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{37} + 10u^{35} + \cdots + 2u^3 - u \\ u^{38} - u^{37} + \cdots + u + 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -4u^{37} + 4u^{36} - 44u^{35} + 40u^{34} - 228u^{33} + 192u^{32} - 708u^{31} + 556u^{30} - 1396u^{29} + 1024u^{28} - 1636u^{27} + 1100u^{26} - 628u^{25} + 284u^{24} + 1308u^{23} - 1084u^{22} + 2424u^{21} - 1760u^{20} + 1512u^{19} - 1012u^{18} - 320u^{17} + 300u^{16} - 1080u^{15} + 804u^{14} - 528u^{13} + 396u^{12} + 92u^{11} - 44u^{10} + 132u^9 - 92u^8 - 16u^7 - 12u^6 - 36u^5 + 8u^4 + 4u^3 + 4u^2 + 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{39} - u^{38} + \cdots + 2u - 1$
c_2	$u^{39} + 17u^{38} + \cdots + 2u^2 + 1$
c_3, c_5, c_7 c_8	$u^{39} + u^{38} + \cdots + 14u - 1$
c_4, c_9	$u^{39} - u^{38} + \cdots + 2u^3 - 1$
c_{10}	$u^{39} - 23u^{38} + \cdots - 2u^2 + 1$
c_{11}	$u^{39} - 3u^{38} + \cdots - 14u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{39} - 17y^{38} + \cdots - 2y^2 - 1$
c_2	$y^{39} + 11y^{38} + \cdots - 4y - 1$
c_3, c_5, c_7 c_8	$y^{39} - 49y^{38} + \cdots + 96y - 1$
c_4, c_9	$y^{39} + 23y^{38} + \cdots + 2y^2 - 1$
c_{10}	$y^{39} - 13y^{38} + \cdots + 4y - 1$
c_{11}	$y^{39} - 5y^{38} + \cdots + 64y - 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.071922 + 0.993246I$	$1.71946 + 2.04419I$	$8.16431 - 3.89320I$
$u = -0.071922 - 0.993246I$	$1.71946 - 2.04419I$	$8.16431 + 3.89320I$
$u = \quad 0.435411 + 0.809083I$	$-1.87228 - 5.10221I$	$-1.97486 + 8.58209I$
$u = \quad 0.435411 - 0.809083I$	$-1.87228 + 5.10221I$	$-1.97486 - 8.58209I$
$u = -0.909371 + 0.016687I$	$10.31070 - 1.71289I$	$5.85984 + 0.15979I$
$u = -0.909371 - 0.016687I$	$10.31070 + 1.71289I$	$5.85984 - 0.15979I$
$u = \quad 0.908911 + 0.030266I$	$8.53389 + 7.14392I$	$3.38402 - 4.70933I$
$u = \quad 0.908911 - 0.030266I$	$8.53389 - 7.14392I$	$3.38402 + 4.70933I$
$u = -0.411819 + 1.010030I$	$0.09606 + 2.71206I$	$0.59234 - 4.52974I$
$u = -0.411819 - 1.010030I$	$0.09606 - 2.71206I$	$0.59234 + 4.52974I$
$u = \quad 0.880484$	4.53816	-0.00697750
$u = -0.305665 + 0.802271I$	$0.32922 + 1.44532I$	$2.59215 - 4.77277I$
$u = -0.305665 - 0.802271I$	$0.32922 - 1.44532I$	$2.59215 + 4.77277I$
$u = -0.293342 + 1.133220I$	$3.74981 - 2.16888I$	$7.25820 + 2.13079I$
$u = -0.293342 - 1.133220I$	$3.74981 + 2.16888I$	$7.25820 - 2.13079I$
$u = \quad 0.342277 + 1.124620I$	$5.04615 - 2.65347I$	$9.41633 + 3.85440I$
$u = \quad 0.342277 - 1.124620I$	$5.04615 + 2.65347I$	$9.41633 - 3.85440I$
$u = \quad 0.429374 + 1.097570I$	$4.38863 - 4.56519I$	$7.75323 + 4.92219I$
$u = \quad 0.429374 - 1.097570I$	$4.38863 + 4.56519I$	$7.75323 - 4.92219I$
$u = -0.464708 + 1.087840I$	$2.47286 + 9.36763I$	$4.01171 - 9.56282I$
$u = -0.464708 - 1.087840I$	$2.47286 - 9.36763I$	$4.01171 + 9.56282I$
$u = \quad 0.415674 + 0.642054I$	$-2.32655 + 1.37512I$	$-4.12538 - 0.53412I$
$u = \quad 0.415674 - 0.642054I$	$-2.32655 - 1.37512I$	$-4.12538 + 0.53412I$
$u = -0.632416 + 0.199765I$	$-0.01291 - 5.16822I$	$0.66391 + 6.04707I$
$u = -0.632416 - 0.199765I$	$-0.01291 + 5.16822I$	$0.66391 - 6.04707I$
$u = \quad 0.467898 + 1.254570I$	$8.33752 - 4.79855I$	$3.23494 + 3.06059I$
$u = \quad 0.467898 - 1.254570I$	$8.33752 + 4.79855I$	$3.23494 - 3.06059I$
$u = \quad 0.454344 + 1.275250I$	$12.54280 + 2.32319I$	$6.85027 - 1.71176I$
$u = \quad 0.454344 - 1.275250I$	$12.54280 - 2.32319I$	$6.85027 + 1.71176I$
$u = \quad 0.488216 + 1.263380I$	$12.2898 - 12.1343I$	$6.37996 + 7.62883I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.488216 - 1.263380I$	$12.2898 + 12.1343I$	$6.37996 - 7.62883I$
$u = -0.462613 + 1.273220I$	$14.2633 + 3.1512I$	$9.14562 - 2.87617I$
$u = -0.462613 - 1.273220I$	$14.2633 - 3.1512I$	$9.14562 + 2.87617I$
$u = -0.481297 + 1.266520I$	$14.1233 + 6.6701I$	$8.91783 - 3.16828I$
$u = -0.481297 - 1.266520I$	$14.1233 - 6.6701I$	$8.91783 + 3.16828I$
$u = 0.599274 + 0.105705I$	$1.67499 + 0.65150I$	$4.60786 - 0.90927I$
$u = 0.599274 - 0.105705I$	$1.67499 - 0.65150I$	$4.60786 + 0.90927I$
$u = -0.448469 + 0.341157I$	$-1.70724 + 0.92516I$	$-3.72881 - 0.98147I$
$u = -0.448469 - 0.341157I$	$-1.70724 - 0.92516I$	$-3.72881 + 0.98147I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{39} - u^{38} + \cdots + 2u - 1$
c_2	$u^{39} + 17u^{38} + \cdots + 2u^2 + 1$
c_3, c_5, c_7 c_8	$u^{39} + u^{38} + \cdots + 14u - 1$
c_4, c_9	$u^{39} - u^{38} + \cdots + 2u^3 - 1$
c_{10}	$u^{39} - 23u^{38} + \cdots - 2u^2 + 1$
c_{11}	$u^{39} - 3u^{38} + \cdots - 14u + 3$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{39} - 17y^{38} + \cdots - 2y^2 - 1$
c_2	$y^{39} + 11y^{38} + \cdots - 4y - 1$
c_3, c_5, c_7 c_8	$y^{39} - 49y^{38} + \cdots + 96y - 1$
c_4, c_9	$y^{39} + 23y^{38} + \cdots + 2y^2 - 1$
c_{10}	$y^{39} - 13y^{38} + \cdots + 4y - 1$
c_{11}	$y^{39} - 5y^{38} + \cdots + 64y - 9$