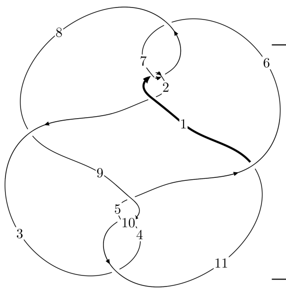
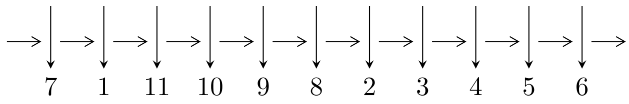
$11a_{236}$ ($K11a_{236}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{48} - 2u^{47} + \cdots - 4u + 1 \rangle$$
$$I_2^u = \langle u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 49 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. $I_1^u = \langle u^{48} - 2u^{47} + \cdots - 4u + 1 \rangle$

(i) Arc colorings

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

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} -u^8 + u^6 - u^4 + 1 \\ -u^8 + 2u^6 - 2u^4 + 2u^2 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -u^{20} + 3u^{18} - 7u^{16} + 10u^{14} - 10u^{12} + 7u^{10} - u^8 - 2u^6 + 3u^4 - 3u^2 + 1 \\ -u^{20} + 4u^{18} - 10u^{16} + 18u^{14} - 23u^{12} + 24u^{10} - 18u^8 + 10u^6 - 5u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^7 + 2u^5 - 2u^3 + 2u \\ -u^9 + u^7 - u^5 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{19} + 4u^{17} - 10u^{15} + 18u^{13} - 23u^{11} + 24u^9 - 18u^7 + 10u^5 - 5u^3 \\ -u^{21} + 3u^{19} - 7u^{17} + 10u^{15} - 10u^{13} + 7u^{11} - u^9 - 2u^7 + 3u^5 - 3u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u^{47} + 3u^{46} + \cdots - 4u + 2 \\ -u^{47} + 3u^{46} + \cdots - 6u + 2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u^{47} + 3u^{46} + \cdots - 4u + 2 \\ -u^{47} + 3u^{46} + \cdots - 6u + 2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 8u^{47} - 12u^{46} + \cdots + 28u - 26$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{48} + 2u^{47} + \cdots + 4u + 1$
c_2, c_6	$u^{48} + 16u^{47} + \cdots + 8u + 1$
c_3, c_5	$u^{48} - 3u^{47} + \cdots - 20u^2 + 1$
c_4, c_9, c_{10}	$u^{48} + 2u^{47} + \cdots + 4u + 1$
c_8, c_{11}	$u^{48} - 14u^{46} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{48} - 16y^{47} + \cdots - 8y + 1$
c_2, c_6	$y^{48} + 32y^{47} + \cdots - 8y + 1$
c_3, c_5	$y^{48} + 27y^{47} + \cdots - 40y + 1$
c_4, c_9, c_{10}	$y^{48} - 40y^{47} + \cdots - 8y + 1$
c_8, c_{11}	$y^{48} - 28y^{47} + \cdots + 72y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.882555 + 0.461026I$	$-3.01031 - 4.88758I$	$-15.6251 + 6.5404I$
$u = \ \ 0.882555 - 0.461026I$	$-3.01031 + 4.88758I$	$-15.6251 - 6.5404I$
$u = \ \ 0.665767 + 0.762214I$	$0.632478 + 0.108144I$	$-9.55124 + 0.86883I$
$u = \ \ 0.665767 - 0.762214I$	$0.632478 - 0.108144I$	$-9.55124 - 0.86883I$
$u = -0.639372 + 0.784790I$	$3.51281 - 4.08944I$	$-6.57921 + 3.06594I$
$u = -0.639372 - 0.784790I$	$3.51281 + 4.08944I$	$-6.57921 - 3.06594I$
$u = \ \ 0.624433 + 0.797000I$	$-1.18842 + 8.10290I$	$-11.33189 - 4.69039I$
$u = \ \ 0.624433 - 0.797000I$	$-1.18842 - 8.10290I$	$-11.33189 + 4.69039I$
$u = -0.785703 + 0.584322I$	$1.37338 + 2.15146I$	$-8.25248 - 5.45590I$
$u = -0.785703 - 0.584322I$	$1.37338 - 2.15146I$	$-8.25248 + 5.45590I$
$u = -1.02158$	-4.93269	-18.1530
$u = \ \ 0.644420 + 0.678291I$	$0.048446 + 0.560613I$	$-11.68780 - 1.95261I$
$u = \ \ 0.644420 - 0.678291I$	$0.048446 - 0.560613I$	$-11.68780 + 1.95261I$
$u = \ \ 1.070420 + 0.070047I$	$-2.46715 - 3.58742I$	$-13.8838 + 4.2943I$
$u = \ \ 1.070420 - 0.070047I$	$-2.46715 + 3.58742I$	$-13.8838 - 4.2943I$
$u = -0.921125$	-4.91974	-18.6280
$u = -0.555627 + 0.727194I$	$-5.98604 - 1.18604I$	$-15.5397 + 0.4606I$
$u = -0.555627 - 0.727194I$	$-5.98604 + 1.18604I$	$-15.5397 - 0.4606I$
$u = -1.093390 + 0.071584I$	$-7.29017 + 7.41299I$	$-18.4799 - 5.5389I$
$u = -1.093390 - 0.071584I$	$-7.29017 - 7.41299I$	$-18.4799 + 5.5389I$
$u = \ \ 1.09915$	-11.4368	-21.8600
$u = -0.841196 + 0.750320I$	$3.16432 - 1.24428I$	$-8.04097 + 0.56162I$
$u = -0.841196 - 0.750320I$	$3.16432 + 1.24428I$	$-8.04097 - 0.56162I$
$u = \ \ 0.863763 + 0.744913I$	$6.99140 - 2.82021I$	$-3.95134 + 3.08292I$
$u = \ \ 0.863763 - 0.744913I$	$6.99140 + 2.82021I$	$-3.95134 - 3.08292I$
$u = -0.977993 + 0.605871I$	$0.66805 + 2.46888I$	$-10.26548 - 1.31520I$
$u = -0.977993 - 0.605871I$	$0.66805 - 2.46888I$	$-10.26548 + 1.31520I$
$u = -0.885079 + 0.741658I$	$3.03130 + 6.89085I$	$-8.49212 - 6.46442I$
$u = -0.885079 - 0.741658I$	$3.03130 - 6.89085I$	$-8.49212 + 6.46442I$
$u = \ \ 1.009840 + 0.589266I$	$-4.16473 + 0.96747I$	$-15.6034 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.009840 - 0.589266I$	$-4.16473 - 0.96747I$	$-15.6034 + 0.I$
$u = \ \ 0.996479 + 0.655041I$	$-0.98972 - 5.75638I$	$-13.3076 + 6.8650I$
$u = \ \ 0.996479 - 0.655041I$	$-0.98972 + 5.75638I$	$-13.3076 - 6.8650I$
$u = -1.031620 + 0.650416I$	$-7.35665 + 6.46067I$	$-17.5687 - 5.3712I$
$u = -1.031620 - 0.650416I$	$-7.35665 - 6.46067I$	$-17.5687 + 5.3712I$
$u = \ \ 1.006860 + 0.688557I$	$-0.39402 - 5.62399I$	$-11.59767 + 4.05733I$
$u = \ \ 1.006860 - 0.688557I$	$-0.39402 + 5.62399I$	$-11.59767 - 4.05733I$
$u = -1.024260 + 0.692231I$	$2.35847 + 9.67537I$	$-8.68198 - 7.82216I$
$u = -1.024260 - 0.692231I$	$2.35847 - 9.67537I$	$-8.68198 + 7.82216I$
$u = \ \ 1.033900 + 0.692265I$	$-2.41639 - 13.71870I$	$-13.3452 + 9.2783I$
$u = \ \ 1.033900 - 0.692265I$	$-2.41639 + 13.71870I$	$-13.3452 - 9.2783I$
$u = \ \ 0.376949 + 0.637932I$	$-2.56451 - 5.60912I$	$-12.01724 + 5.48028I$
$u = \ \ 0.376949 - 0.637932I$	$-2.56451 + 5.60912I$	$-12.01724 - 5.48028I$
$u = -0.339798 + 0.564531I$	$1.97900 + 1.93404I$	$-6.47322 - 4.04899I$
$u = -0.339798 - 0.564531I$	$1.97900 - 1.93404I$	$-6.47322 + 4.04899I$
$u = \ \ 0.209593 + 0.518446I$	$-1.32155 + 1.52053I$	$-9.58208 - 0.33085I$
$u = \ \ 0.209593 - 0.518446I$	$-1.32155 - 1.52053I$	$-9.58208 + 0.33085I$
$u = \ \ 0.421695$	-0.568709	-17.6430

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

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -18$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$	-4.93480	-18.0000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$(u-1)(u^{48}+2u^{47}+\cdots+4u+1)$
c_2, c_6	$(u+1)(u^{48}+16u^{47}+\cdots+8u+1)$
c_3, c_5	$u(u^{48}-3u^{47}+\cdots-20u^2+1)$
c_4, c_9, c_{10}	$(u-1)(u^{48}+2u^{47}+\cdots+4u+1)$
c_8, c_{11}	$(u-1)(u^{48}-14u^{46}+\cdots+4u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y-1)(y^{48}-16y^{47}+\cdots-8y+1)$
c_2, c_6	$(y-1)(y^{48}+32y^{47}+\cdots-8y+1)$
c_3, c_5	$y(y^{48}+27y^{47}+\cdots-40y+1)$
c_4, c_9, c_{10}	$(y-1)(y^{48}-40y^{47}+\cdots-8y+1)$
c_8, c_{11}	$(y-1)(y^{48}-28y^{47}+\cdots+72y+1)$