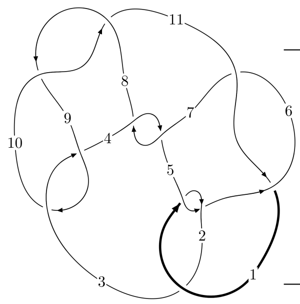
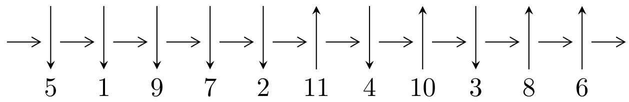
$11a_{159}$ ($K11a_{159}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{55} + u^{54} + \cdots + 2u + 1 \rangle$$

* 1 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. $I_1^u = \langle u^{55} + u^{54} + \cdots + 2u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

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

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

$$a_5 = \begin{pmatrix} u^{10} + u^8 + 2u^6 + u^4 + u^2 + 1 \\ u^{12} + 2u^{10} + 4u^8 + 4u^6 + 3u^4 + 2u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^{17} - 2u^{15} - 5u^{13} - 6u^{11} - 7u^9 - 6u^7 - 2u^5 - 2u^3 + u \\ u^{17} + 3u^{15} + 7u^{13} + 10u^{11} + 11u^9 + 10u^7 + 6u^5 + 4u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^{29} - 4u^{27} + \cdots + 2u^3 - u \\ u^{29} + 5u^{27} + \cdots + 3u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{51} - 8u^{49} + \cdots - 5u^3 - 2u \\ -u^{53} - 9u^{51} + \cdots + u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{51} - 8u^{49} + \cdots - 5u^3 - 2u \\ -u^{53} - 9u^{51} + \cdots + u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{54} - 36u^{52} + \cdots - 4u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{55} + u^{54} + \cdots + 2u^3 + 1$
c_2	$u^{55} + 29u^{54} + \cdots - 6u^2 + 1$
c_3, c_9	$u^{55} + u^{54} + \cdots + 2u + 1$
c_4, c_7	$u^{55} - 5u^{54} + \cdots - 4u + 1$
c_6, c_{11}	$u^{55} + 3u^{54} + \cdots + 35u + 16$
c_8, c_{10}	$u^{55} - 19u^{54} + \cdots - 18u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{55} - 29y^{54} + \cdots + 6y^2 - 1$
c_2	$y^{55} - 5y^{54} + \cdots + 12y - 1$
c_3, c_9	$y^{55} + 19y^{54} + \cdots + 18y^2 - 1$
c_4, c_7	$y^{55} + 31y^{54} + \cdots - 92y - 1$
c_6, c_{11}	$y^{55} + 39y^{54} + \cdots - 6167y - 256$
c_8, c_{10}	$y^{55} + 35y^{54} + \cdots + 36y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.784082 + 0.635234I$	$-1.91993 + 3.95621I$	$-4.32723 - 2.21514I$
$u = \quad 0.784082 - 0.635234I$	$-1.91993 - 3.95621I$	$-4.32723 + 2.21514I$
$u = -0.799722 + 0.633488I$	$-4.89200 - 8.77056I$	$-7.47137 + 5.34591I$
$u = -0.799722 - 0.633488I$	$-4.89200 + 8.77056I$	$-7.47137 - 5.34591I$
$u = \quad 0.695449 + 0.747109I$	$-3.52521 + 0.06578I$	$-10.04150 - 0.64430I$
$u = \quad 0.695449 - 0.747109I$	$-3.52521 - 0.06578I$	$-10.04150 + 0.64430I$
$u = -0.785485 + 0.659519I$	$-5.96663 - 0.17301I$	$-9.26357 - 0.91884I$
$u = -0.785485 - 0.659519I$	$-5.96663 + 0.17301I$	$-9.26357 + 0.91884I$
$u = \quad 0.515960 + 0.907861I$	$-2.45106 - 5.66045I$	$-4.09002 + 7.28827I$
$u = \quad 0.515960 - 0.907861I$	$-2.45106 + 5.66045I$	$-4.09002 - 7.28827I$
$u = \quad 0.087591 + 1.044510I$	$0.0418156 + 0.0593950I$	$-1.97321 + 0.28127I$
$u = \quad 0.087591 - 1.044510I$	$0.0418156 - 0.0593950I$	$-1.97321 - 0.28127I$
$u = \quad 0.732924 + 0.589195I$	$1.02771 + 3.24584I$	$-2.27897 - 4.07779I$
$u = \quad 0.732924 - 0.589195I$	$1.02771 - 3.24584I$	$-2.27897 + 4.07779I$
$u = -0.518072 + 0.766150I$	$-0.11478 + 1.78039I$	$-0.55066 - 3.60054I$
$u = -0.518072 - 0.766150I$	$-0.11478 - 1.78039I$	$-0.55066 + 3.60054I$
$u = -0.066273 + 1.075310I$	$4.04900 + 3.40061I$	$3.11315 - 3.08609I$
$u = -0.066273 - 1.075310I$	$4.04900 - 3.40061I$	$3.11315 + 3.08609I$
$u = -0.013325 + 1.085250I$	$6.52620 + 2.29211I$	$4.76004 - 3.60647I$
$u = -0.013325 - 1.085250I$	$6.52620 - 2.29211I$	$4.76004 + 3.60647I$
$u = \quad 0.080625 + 1.087480I$	$1.25671 - 8.17694I$	$0. + 6.49947I$
$u = \quad 0.080625 - 1.087480I$	$1.25671 + 8.17694I$	$0. - 6.49947I$
$u = -0.682148 + 0.562866I$	$1.33027 + 1.15553I$	$-1.16546 - 3.23863I$
$u = -0.682148 - 0.562866I$	$1.33027 - 1.15553I$	$-1.16546 + 3.23863I$
$u = \quad 0.741553 + 0.863345I$	$-5.44101 - 2.81013I$	$-7.05601 + 3.05455I$
$u = \quad 0.741553 - 0.863345I$	$-5.44101 + 2.81013I$	$-7.05601 - 3.05455I$
$u = -0.757396 + 0.852445I$	$-8.97089 - 1.53080I$	$-10.56468 + 0.I$
$u = -0.757396 - 0.852445I$	$-8.97089 + 1.53080I$	$-10.56468 + 0.I$
$u = \quad 0.578305 + 0.998594I$	$-1.71452 + 1.81047I$	0
$u = \quad 0.578305 - 0.998594I$	$-1.71452 - 1.81047I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.663907 + 0.946346I$	$-2.91576 - 5.31435I$	$-7.80390 + 6.55381I$
$u = \quad 0.663907 - 0.946346I$	$-2.91576 + 5.31435I$	$-7.80390 - 6.55381I$
$u = -0.751586 + 0.878593I$	$-8.89140 + 7.22930I$	$-10.25643 - 6.47034I$
$u = -0.751586 - 0.878593I$	$-8.89140 - 7.22930I$	$-10.25643 + 6.47034I$
$u = -0.606564 + 0.990704I$	$0.84076 + 2.75512I$	0
$u = -0.606564 - 0.990704I$	$0.84076 - 2.75512I$	0
$u = -0.644080 + 1.018780I$	$2.61827 + 4.00138I$	0
$u = -0.644080 - 1.018780I$	$2.61827 - 4.00138I$	0
$u = \quad 0.660956 + 1.025220I$	$2.29946 - 8.58321I$	0
$u = \quad 0.660956 - 1.025220I$	$2.29946 + 8.58321I$	0
$u = -0.698488 + 1.015790I$	$-4.89384 + 5.78358I$	0
$u = -0.698488 - 1.015790I$	$-4.89384 - 5.78358I$	0
$u = \quad 0.690811 + 1.025790I$	$-0.74984 - 9.53517I$	0
$u = \quad 0.690811 - 1.025790I$	$-0.74984 + 9.53517I$	0
$u = -0.696320 + 1.031360I$	$-3.6961 + 14.4089I$	0
$u = -0.696320 - 1.031360I$	$-3.6961 - 14.4089I$	0
$u = -0.171816 + 0.720092I$	$0.95831 + 1.60933I$	$1.49417 - 5.74918I$
$u = -0.171816 - 0.720092I$	$0.95831 - 1.60933I$	$1.49417 + 5.74918I$
$u = \quad 0.630067 + 0.344372I$	$-3.34533 - 6.30811I$	$-7.15638 + 6.23846I$
$u = \quad 0.630067 - 0.344372I$	$-3.34533 + 6.30811I$	$-7.15638 - 6.23846I$
$u = -0.561648 + 0.367518I$	$-0.48181 + 1.78744I$	$-3.72385 - 3.38377I$
$u = -0.561648 - 0.367518I$	$-0.48181 - 1.78744I$	$-3.72385 + 3.38377I$
$u = \quad 0.569392 + 0.257173I$	$-4.05721 + 1.86906I$	$-9.08122 - 0.59288I$
$u = \quad 0.569392 - 0.257173I$	$-4.05721 - 1.86906I$	$-9.08122 + 0.59288I$
$u = -0.357397$	-1.02390	-10.8300

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{55} + u^{54} + \cdots + 2u^3 + 1$
c_2	$u^{55} + 29u^{54} + \cdots - 6u^2 + 1$
c_3, c_9	$u^{55} + u^{54} + \cdots + 2u + 1$
c_4, c_7	$u^{55} - 5u^{54} + \cdots - 4u + 1$
c_6, c_{11}	$u^{55} + 3u^{54} + \cdots + 35u + 16$
c_8, c_{10}	$u^{55} - 19u^{54} + \cdots - 18u^2 + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{55} - 29y^{54} + \cdots + 6y^2 - 1$
c_2	$y^{55} - 5y^{54} + \cdots + 12y - 1$
c_3, c_9	$y^{55} + 19y^{54} + \cdots + 18y^2 - 1$
c_4, c_7	$y^{55} + 31y^{54} + \cdots - 92y - 1$
c_6, c_{11}	$y^{55} + 39y^{54} + \cdots - 6167y - 256$
c_8, c_{10}	$y^{55} + 35y^{54} + \cdots + 36y - 1$