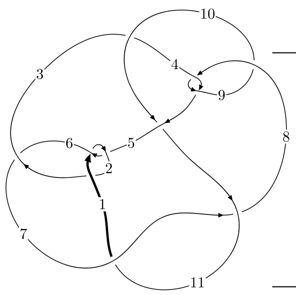
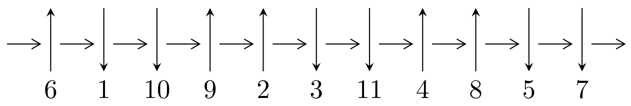
$11a_{91}$ ($K11a_{91}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{64} - u^{63} + \cdots - 2u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 64 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. $I_1^u = \langle u^{64} - u^{63} + \cdots - 2u + 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^5 + 2u^3 - u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^6 - u^4 + 1 \\ u^8 - 2u^6 + 2u^4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{13} + 4u^{11} - 7u^9 + 6u^7 - 2u^5 - u \\ u^{13} - 3u^{11} + 5u^9 - 4u^7 + 2u^5 - u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^{21} + 6u^{19} + \cdots + 2u^3 - u \\ u^{21} - 5u^{19} + 13u^{17} - 20u^{15} + 20u^{13} - 13u^{11} + 7u^9 - 4u^7 + 3u^5 - u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{50} - 13u^{48} + \cdots + u^2 + 1 \\ -u^{50} + 12u^{48} + \cdots + 4u^4 - u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{27} - 6u^{25} + \cdots + 4u^7 - u^3 \\ u^{29} - 7u^{27} + \cdots - u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{27} - 6u^{25} + \cdots + 4u^7 - u^3 \\ u^{29} - 7u^{27} + \cdots - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{62} + 60u^{60} + \cdots + 4u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{64} - u^{63} + \cdots - 2u + 1$
c_2	$u^{64} + 29u^{63} + \cdots - 16u^4 + 1$
c_3	$u^{64} + 3u^{63} + \cdots + 467u + 88$
c_4, c_8	$u^{64} + u^{63} + \cdots + 2u + 1$
c_6	$u^{64} + u^{63} + \cdots + 11u + 2$
c_7, c_{11}	$u^{64} - 5u^{63} + \cdots - 32u + 1$
c_9	$u^{64} - 31u^{63} + \cdots + 16u^4 + 1$
c_{10}	$u^{64} - u^{63} + \cdots - 8u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{64} + 29y^{63} + \cdots - 16y^4 + 1$
c_2	$y^{64} + 13y^{63} + \cdots - 32y^2 + 1$
c_3	$y^{64} + 21y^{63} + \cdots + 151687y + 7744$
c_4, c_8	$y^{64} - 31y^{63} + \cdots + 16y^4 + 1$
c_6	$y^{64} - 3y^{63} + \cdots - 213y + 4$
c_7, c_{11}	$y^{64} + 49y^{63} + \cdots - 160y + 1$
c_9	$y^{64} + 5y^{63} + \cdots + 32y^2 + 1$
c_{10}	$y^{64} + y^{63} + \cdots + 32y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.939104 + 0.339205I$	$1.65512 - 0.97415I$	$3.52790 + 1.04712I$
$u = -0.939104 - 0.339205I$	$1.65512 + 0.97415I$	$3.52790 - 1.04712I$
$u = \quad 0.844956 + 0.545528I$	$0.03472 - 3.65450I$	$-2.09839 + 2.07040I$
$u = \quad 0.844956 - 0.545528I$	$0.03472 + 3.65450I$	$-2.09839 - 2.07040I$
$u = -0.784786 + 0.520323I$	$1.84271 - 1.15146I$	$1.38817 + 3.13013I$
$u = -0.784786 - 0.520323I$	$1.84271 + 1.15146I$	$1.38817 - 3.13013I$
$u = \quad 0.925067 + 0.156259I$	$-0.18490 - 3.01523I$	$0.51085 + 4.08868I$
$u = \quad 0.925067 - 0.156259I$	$-0.18490 + 3.01523I$	$0.51085 - 4.08868I$
$u = \quad 0.691782 + 0.617995I$	$-0.43420 + 8.26774I$	$-3.18319 - 8.31495I$
$u = \quad 0.691782 - 0.617995I$	$-0.43420 - 8.26774I$	$-3.18319 + 8.31495I$
$u = \quad 0.948812 + 0.510706I$	$-1.98631 + 3.10078I$	$-5.45245 - 3.88979I$
$u = \quad 0.948812 - 0.510706I$	$-1.98631 - 3.10078I$	$-5.45245 + 3.88979I$
$u = -0.701071 + 0.591063I$	$1.52804 - 3.28439I$	$0.17422 + 4.06730I$
$u = -0.701071 - 0.591063I$	$1.52804 + 3.28439I$	$0.17422 - 4.06730I$
$u = \quad 0.622278 + 0.585266I$	$-2.93619 + 1.29722I$	$-7.30833 - 2.92067I$
$u = \quad 0.622278 - 0.585266I$	$-2.93619 - 1.29722I$	$-7.30833 + 2.92067I$
$u = -1.071540 + 0.414993I$	$2.79512 - 1.45588I$	0
$u = -1.071540 - 0.414993I$	$2.79512 + 1.45588I$	0
$u = -1.122750 + 0.278948I$	$2.73183 + 0.05760I$	0
$u = -1.122750 - 0.278948I$	$2.73183 - 0.05760I$	0
$u = -1.036170 + 0.550652I$	$-3.04852 - 2.03669I$	0
$u = -1.036170 - 0.550652I$	$-3.04852 + 2.03669I$	0
$u = \quad 0.294713 + 0.772195I$	$1.49417 - 10.13740I$	$-1.81004 + 7.03416I$
$u = \quad 0.294713 - 0.772195I$	$1.49417 + 10.13740I$	$-1.81004 - 7.03416I$
$u = \quad 1.090790 + 0.461542I$	$2.45432 + 5.70994I$	0
$u = \quad 1.090790 - 0.461542I$	$2.45432 - 5.70994I$	0
$u = -0.284380 + 0.763443I$	$3.48322 + 4.95658I$	$1.27407 - 2.78403I$
$u = -0.284380 - 0.763443I$	$3.48322 - 4.95658I$	$1.27407 + 2.78403I$
$u = -1.156900 + 0.262634I$	$5.97549 + 7.09510I$	0
$u = -1.156900 - 0.262634I$	$5.97549 - 7.09510I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.154850 + 0.273654I$	$7.87867 - 1.87799I$	0
$u = 1.154850 - 0.273654I$	$7.87867 + 1.87799I$	0
$u = -0.487387 + 0.645472I$	$-4.65712 - 2.64556I$	$-8.69821 + 3.84156I$
$u = -0.487387 - 0.645472I$	$-4.65712 + 2.64556I$	$-8.69821 - 3.84156I$
$u = 1.064500 + 0.535808I$	$0.17913 + 5.31802I$	0
$u = 1.064500 - 0.535808I$	$0.17913 - 5.31802I$	0
$u = 1.154460 + 0.302003I$	$8.21168 + 1.00289I$	0
$u = 1.154460 - 0.302003I$	$8.21168 - 1.00289I$	0
$u = -1.155880 + 0.315108I$	$6.59460 - 6.19283I$	0
$u = -1.155880 - 0.315108I$	$6.59460 + 6.19283I$	0
$u = -0.423078 + 0.678155I$	$-4.36286 + 4.56971I$	$-7.67331 - 4.88314I$
$u = -0.423078 - 0.678155I$	$-4.36286 - 4.56971I$	$-7.67331 + 4.88314I$
$u = 0.304810 + 0.731968I$	$-1.50287 - 2.92329I$	$-5.31775 + 2.36689I$
$u = 0.304810 - 0.731968I$	$-1.50287 + 2.92329I$	$-5.31775 - 2.36689I$
$u = -1.070330 + 0.558396I$	$-2.47375 - 9.35788I$	0
$u = -1.070330 - 0.558396I$	$-2.47375 + 9.35788I$	0
$u = -0.248813 + 0.743811I$	$4.02540 + 2.21650I$	$2.22128 - 2.47627I$
$u = -0.248813 - 0.743811I$	$4.02540 - 2.21650I$	$2.22128 + 2.47627I$
$u = 0.226658 + 0.736100I$	$2.50217 + 2.88719I$	$-0.11514 - 2.73367I$
$u = 0.226658 - 0.736100I$	$2.50217 - 2.88719I$	$-0.11514 + 2.73367I$
$u = 0.421396 + 0.617038I$	$-1.69065 - 0.75291I$	$-4.16901 + 1.04385I$
$u = 0.421396 - 0.617038I$	$-1.69065 + 0.75291I$	$-4.16901 - 1.04385I$
$u = 1.126510 + 0.550942I$	$0.88876 + 7.79459I$	0
$u = 1.126510 - 0.550942I$	$0.88876 - 7.79459I$	0
$u = 1.142880 + 0.528499I$	$5.14617 + 1.86555I$	0
$u = 1.142880 - 0.528499I$	$5.14617 - 1.86555I$	0
$u = -1.141810 + 0.537319I$	$6.61499 - 7.03708I$	0
$u = -1.141810 - 0.537319I$	$6.61499 + 7.03708I$	0
$u = -1.140370 + 0.553325I$	$5.98813 - 9.90485I$	0
$u = -1.140370 - 0.553325I$	$5.98813 + 9.90485I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$1.140530 + 0.558856I$	$3.9773 + 15.1327I$	0
$u =$	$1.140530 - 0.558856I$	$3.9773 - 15.1327I$	0
$u =$	$0.109376 + 0.527151I$	$-0.08646 - 1.82443I$	$-0.12496 + 3.83658I$
$u =$	$0.109376 - 0.527151I$	$-0.08646 + 1.82443I$	$-0.12496 - 3.83658I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{64} - u^{63} + \cdots - 2u + 1$
c_2	$u^{64} + 29u^{63} + \cdots - 16u^4 + 1$
c_3	$u^{64} + 3u^{63} + \cdots + 467u + 88$
c_4, c_8	$u^{64} + u^{63} + \cdots + 2u + 1$
c_6	$u^{64} + u^{63} + \cdots + 11u + 2$
c_7, c_{11}	$u^{64} - 5u^{63} + \cdots - 32u + 1$
c_9	$u^{64} - 31u^{63} + \cdots + 16u^4 + 1$
c_{10}	$u^{64} - u^{63} + \cdots - 8u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{64} + 29y^{63} + \cdots - 16y^4 + 1$
c_2	$y^{64} + 13y^{63} + \cdots - 32y^2 + 1$
c_3	$y^{64} + 21y^{63} + \cdots + 151687y + 7744$
c_4, c_8	$y^{64} - 31y^{63} + \cdots + 16y^4 + 1$
c_6	$y^{64} - 3y^{63} + \cdots - 213y + 4$
c_7, c_{11}	$y^{64} + 49y^{63} + \cdots - 160y + 1$
c_9	$y^{64} + 5y^{63} + \cdots + 32y^2 + 1$
c_{10}	$y^{64} + y^{63} + \cdots + 32y + 1$