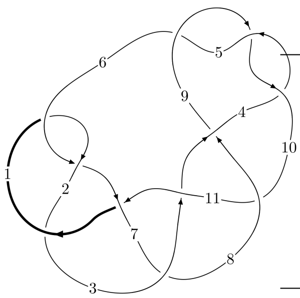
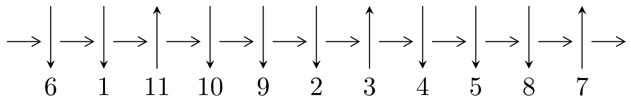
$11a_{178}$ ($K11a_{178}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{61} - u^{60} + \cdots - u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 61 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. $I_1^u = \langle u^{61} - u^{60} + \cdots - u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^8 - u^6 + u^4 + 1 \\ u^8 - 2u^6 + 2u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{11} - 2u^9 + 2u^7 - u^3 \\ u^{13} - 3u^{11} + 5u^9 - 4u^7 + 2u^5 - u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{32} - 7u^{30} + \cdots + 2u^{12} + 1 \\ u^{34} - 8u^{32} + \cdots + 4u^6 + u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{55} + 12u^{53} + \cdots - 5u^7 - 2u^3 \\ -u^{55} + 13u^{53} + \cdots - 2u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{21} - 4u^{19} + 9u^{17} - 12u^{15} + 12u^{13} - 10u^{11} + 9u^9 - 6u^7 + 3u^5 + u \\ u^{21} - 5u^{19} + 13u^{17} - 20u^{15} + 20u^{13} - 13u^{11} + 7u^9 - 4u^7 + 3u^5 - u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{21} - 4u^{19} + 9u^{17} - 12u^{15} + 12u^{13} - 10u^{11} + 9u^9 - 6u^7 + 3u^5 + u \\ u^{21} - 5u^{19} + 13u^{17} - 20u^{15} + 20u^{13} - 13u^{11} + 7u^9 - 4u^7 + 3u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{59} - 56u^{57} + \cdots + 8u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{61} - u^{60} + \cdots - u + 1$
c_2	$u^{61} + 29u^{60} + \cdots + 3u + 1$
c_3	$u^{61} + 7u^{60} + \cdots + 433u + 37$
c_4, c_5, c_9	$u^{61} + u^{60} + \cdots + 3u + 1$
c_7	$u^{61} + u^{60} + \cdots - 211u + 61$
c_8	$u^{61} - u^{60} + \cdots + 11u + 2$
c_{10}	$u^{61} - 13u^{60} + \cdots - 3083u + 283$
c_{11}	$u^{61} - 3u^{60} + \cdots - 89u + 56$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{61} - 29y^{60} + \cdots + 3y - 1$
c_2	$y^{61} + 7y^{60} + \cdots - y - 1$
c_3	$y^{61} + 11y^{60} + \cdots - 18009y - 1369$
c_4, c_5, c_9	$y^{61} + 55y^{60} + \cdots + 3y - 1$
c_7	$y^{61} - 13y^{60} + \cdots + 176159y - 3721$
c_8	$y^{61} + 3y^{60} + \cdots + 57y - 4$
c_{10}	$y^{61} + 19y^{60} + \cdots - 760653y - 80089$
c_{11}	$y^{61} + 15y^{60} + \cdots - 75183y - 3136$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.033100 + 0.187577I$	$3.27959 - 1.47237I$	$-3.77294 + 0.98684I$
$u = 1.033100 - 0.187577I$	$3.27959 + 1.47237I$	$-3.77294 - 0.98684I$
$u = 0.621785 + 0.658999I$	$7.14477 - 7.36689I$	$1.83265 + 6.49541I$
$u = 0.621785 - 0.658999I$	$7.14477 + 7.36689I$	$1.83265 - 6.49541I$
$u = -0.957071 + 0.545546I$	$0.605205 + 0.585495I$	$-3.92457 + 0.I$
$u = -0.957071 - 0.545546I$	$0.605205 - 0.585495I$	$-3.92457 + 0.I$
$u = 0.948153 + 0.574834I$	$6.18322 + 2.55917I$	0
$u = 0.948153 - 0.574834I$	$6.18322 - 2.55917I$	0
$u = -0.612486 + 0.631132I$	$1.61526 + 4.05129I$	$-2.39277 - 6.82409I$
$u = -0.612486 - 0.631132I$	$1.61526 - 4.05129I$	$-2.39277 + 6.82409I$
$u = -1.089710 + 0.268806I$	$-2.65665 + 0.24134I$	$-8.01162 + 0.I$
$u = -1.089710 - 0.268806I$	$-2.65665 - 0.24134I$	$-8.01162 + 0.I$
$u = -0.541944 + 0.674012I$	$8.48817 - 1.61774I$	$3.86252 + 0.20232I$
$u = -0.541944 - 0.674012I$	$8.48817 + 1.61774I$	$3.86252 - 0.20232I$
$u = 1.003470 + 0.545968I$	$1.15617 - 4.09014I$	0
$u = 1.003470 - 0.545968I$	$1.15617 + 4.09014I$	0
$u = 1.120400 + 0.239796I$	$-4.20404 + 3.36287I$	0
$u = 1.120400 - 0.239796I$	$-4.20404 - 3.36287I$	0
$u = -1.129610 + 0.223326I$	$1.12751 - 6.89407I$	0
$u = -1.129610 - 0.223326I$	$1.12751 + 6.89407I$	0
$u = -1.112280 + 0.300936I$	$-2.83860 + 0.05729I$	0
$u = -1.112280 - 0.300936I$	$-2.83860 - 0.05729I$	0
$u = 0.702655 + 0.463134I$	$2.64368 - 1.93405I$	$-1.89634 + 4.21284I$
$u = 0.702655 - 0.463134I$	$2.64368 + 1.93405I$	$-1.89634 - 4.21284I$
$u = 0.343323 + 0.767640I$	$5.74647 + 9.59086I$	$0.22395 - 6.02636I$
$u = 0.343323 - 0.767640I$	$5.74647 - 9.59086I$	$0.22395 + 6.02636I$
$u = -1.010660 + 0.577213I$	$7.10735 + 6.46891I$	0
$u = -1.010660 - 0.577213I$	$7.10735 - 6.46891I$	0
$u = 1.115370 + 0.342685I$	$-5.28239 - 3.39079I$	0
$u = 1.115370 - 0.342685I$	$-5.28239 + 3.39079I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.394147 + 0.730677I$	$7.77499 - 0.61886I$	$2.98419 + 0.41079I$
$u = -0.394147 - 0.730677I$	$7.77499 + 0.61886I$	$2.98419 - 0.41079I$
$u = 0.552270 + 0.617769I$	$2.48756 - 0.50881I$	$0.570526 - 0.185507I$
$u = 0.552270 - 0.617769I$	$2.48756 + 0.50881I$	$0.570526 + 0.185507I$
$u = -0.336261 + 0.751744I$	$0.27382 - 6.06188I$	$-4.21507 + 6.02215I$
$u = -0.336261 - 0.751744I$	$0.27382 + 6.06188I$	$-4.21507 - 6.02215I$
$u = -1.124710 + 0.366091I$	$-0.41617 + 6.80603I$	0
$u = -1.124710 - 0.366091I$	$-0.41617 - 6.80603I$	0
$u = 0.345416 + 0.715523I$	$1.53930 + 2.31744I$	$-1.192371 - 0.636222I$
$u = 0.345416 - 0.715523I$	$1.53930 - 2.31744I$	$-1.192371 + 0.636222I$
$u = 1.113390 + 0.485777I$	$0.382880 - 0.851377I$	0
$u = 1.113390 - 0.485777I$	$0.382880 + 0.851377I$	0
$u = -1.112330 + 0.510589I$	$-4.14943 + 4.18449I$	0
$u = -1.112330 - 0.510589I$	$-4.14943 - 4.18449I$	0
$u = -1.096940 + 0.573191I$	$5.71025 + 5.58980I$	0
$u = -1.096940 - 0.573191I$	$5.71025 - 5.58980I$	0
$u = 1.118690 + 0.534112I$	$-1.26791 - 7.55537I$	0
$u = 1.118690 - 0.534112I$	$-1.26791 + 7.55537I$	0
$u = 1.111260 + 0.557520I$	$-0.69264 - 7.18756I$	0
$u = 1.111260 - 0.557520I$	$-0.69264 + 7.18756I$	0
$u = 0.277033 + 0.691934I$	$1.13938 + 2.86125I$	$-3.45602 - 3.52851I$
$u = 0.277033 - 0.691934I$	$1.13938 - 2.86125I$	$-3.45602 + 3.52851I$
$u = -1.122410 + 0.565959I$	$-2.03053 + 11.04660I$	0
$u = -1.122410 - 0.565959I$	$-2.03053 - 11.04660I$	0
$u = 1.124890 + 0.572801I$	$3.4458 - 14.6424I$	0
$u = 1.124890 - 0.572801I$	$3.4458 + 14.6424I$	0
$u = -0.210413 + 0.629262I$	$-1.67346 + 0.23991I$	$-8.17483 - 1.24926I$
$u = -0.210413 - 0.629262I$	$-1.67346 - 0.23991I$	$-8.17483 + 1.24926I$
$u = 0.126206 + 0.638743I$	$3.06025 - 3.37781I$	$-2.51099 + 2.74692I$
$u = 0.126206 - 0.638743I$	$3.06025 + 3.37781I$	$-2.51099 - 2.74692I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.612895$	-0.928331	-10.6740

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{61} - u^{60} + \cdots - u + 1$
c_2	$u^{61} + 29u^{60} + \cdots + 3u + 1$
c_3	$u^{61} + 7u^{60} + \cdots + 433u + 37$
c_4, c_5, c_9	$u^{61} + u^{60} + \cdots + 3u + 1$
c_7	$u^{61} + u^{60} + \cdots - 211u + 61$
c_8	$u^{61} - u^{60} + \cdots + 11u + 2$
c_{10}	$u^{61} - 13u^{60} + \cdots - 3083u + 283$
c_{11}	$u^{61} - 3u^{60} + \cdots - 89u + 56$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{61} - 29y^{60} + \cdots + 3y - 1$
c_2	$y^{61} + 7y^{60} + \cdots - y - 1$
c_3	$y^{61} + 11y^{60} + \cdots - 18009y - 1369$
c_4, c_5, c_9	$y^{61} + 55y^{60} + \cdots + 3y - 1$
c_7	$y^{61} - 13y^{60} + \cdots + 176159y - 3721$
c_8	$y^{61} + 3y^{60} + \cdots + 57y - 4$
c_{10}	$y^{61} + 19y^{60} + \cdots - 760653y - 80089$
c_{11}	$y^{61} + 15y^{60} + \cdots - 75183y - 3136$