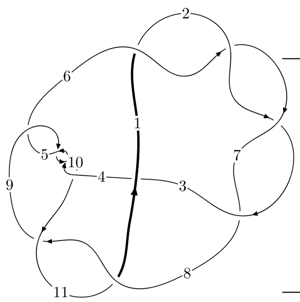
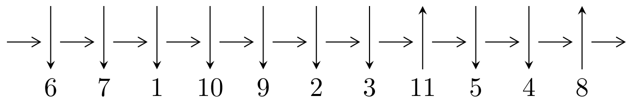
$11a_{310}$ ($K11a_{310}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{30} - u^{29} + \cdots - u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 30 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. $I_1^u = \langle u^{30} - u^{29} + \cdots - u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^5 - 2u^3 - u \\ u^5 - 3u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^7 - 4u^5 + 4u^3 \\ u^9 - 5u^7 + 7u^5 - 2u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{12} + 7u^{10} - 17u^8 + 16u^6 - 4u^4 - u^2 + 1 \\ -u^{14} + 8u^{12} - 23u^{10} + 28u^8 - 14u^6 + 4u^4 + u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{26} + 15u^{24} + \cdots - u^2 + 1 \\ -u^{28} + 16u^{26} + \cdots - 8u^6 - u^4 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{19} - 10u^{17} + 38u^{15} - 66u^{13} + 47u^{11} - 4u^9 - 6u^7 + 2u^5 + 5u^3 \\ u^{19} - 11u^{17} + 48u^{15} - 105u^{13} + 121u^{11} - 73u^9 + 20u^7 + 6u^5 - 3u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{19} - 10u^{17} + 38u^{15} - 66u^{13} + 47u^{11} - 4u^9 - 6u^7 + 2u^5 + 5u^3 \\ u^{19} - 11u^{17} + 48u^{15} - 105u^{13} + 121u^{11} - 73u^9 + 20u^7 + 6u^5 - 3u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{28} + 68u^{26} - 500u^{24} - 4u^{23} + 2080u^{22} + 56u^{21} - 5384u^{20} - 328u^{19} + 9008u^{18} + 1040u^{17} - 9824u^{16} - 1936u^{15} + 6800u^{14} + 2164u^{13} - 2540u^{12} - 1440u^{11} - 52u^{10} + 508u^9 + 512u^8 + 4u^7 - 220u^6 - 64u^5 + 12u^4 + 20u^3 + 8u^2 + 4u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6 c_7	$u^{30} - u^{29} + \cdots - u - 1$
c_3	$u^{30} - 9u^{29} + \cdots + 127u - 41$
c_4, c_5, c_9 c_{10}	$u^{30} + u^{29} + \cdots - 3u - 1$
c_8, c_{11}	$u^{30} + 5u^{29} + \cdots + 73u + 11$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_7	$y^{30} - 35y^{29} + \cdots - 5y + 1$
c_3	$y^{30} - 11y^{29} + \cdots - 17441y + 1681$
c_4, c_5, c_9 c_{10}	$y^{30} + 33y^{29} + \cdots - 5y + 1$
c_8, c_{11}	$y^{30} + 21y^{29} + \cdots - 3217y + 121$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.735096 + 0.483437I$	$3.93491 + 7.78666I$	$-6.52057 - 6.95091I$
$u = -0.735096 - 0.483437I$	$3.93491 - 7.78666I$	$-6.52057 + 6.95091I$
$u = \quad 0.823408 + 0.305892I$	$2.75760 + 1.21639I$	$-8.64796 + 0.89072I$
$u = \quad 0.823408 - 0.305892I$	$2.75760 - 1.21639I$	$-8.64796 - 0.89072I$
$u = \quad 0.745532 + 0.437435I$	$-3.04287 - 5.13177I$	$-10.41474 + 8.03667I$
$u = \quad 0.745532 - 0.437435I$	$-3.04287 + 5.13177I$	$-10.41474 - 8.03667I$
$u = -0.764445 + 0.378232I$	$-3.43946 + 1.21065I$	$-12.14938 - 1.12081I$
$u = -0.764445 - 0.378232I$	$-3.43946 - 1.21065I$	$-12.14938 + 1.12081I$
$u = -0.452774 + 0.498752I$	$8.77358 + 1.74014I$	$-1.26540 - 4.02754I$
$u = -0.452774 - 0.498752I$	$8.77358 - 1.74014I$	$-1.26540 + 4.02754I$
$u = -0.122759 + 0.592008I$	$5.72920 - 4.13111I$	$-2.75453 + 2.25855I$
$u = -0.122759 - 0.592008I$	$5.72920 + 4.13111I$	$-2.75453 - 2.25855I$
$u = \quad 0.446337 + 0.365752I$	$1.28799 - 1.35763I$	$-1.87160 + 6.24969I$
$u = \quad 0.446337 - 0.365752I$	$1.28799 + 1.35763I$	$-1.87160 - 6.24969I$
$u = \quad 0.054976 + 0.542370I$	$-1.05109 + 1.79539I$	$-6.43581 - 3.73700I$
$u = \quad 0.054976 - 0.542370I$	$-1.05109 - 1.79539I$	$-6.43581 + 3.73700I$
$u = \quad 1.50038 + 0.09278I$	$2.39020 - 3.71852I$	$-5.27418 + 3.00848I$
$u = \quad 1.50038 - 0.09278I$	$2.39020 + 3.71852I$	$-5.27418 - 3.00848I$
$u = -1.53695 + 0.05480I$	$-5.38754 + 2.62456I$	$-7.08196 - 4.54676I$
$u = -1.53695 - 0.05480I$	$-5.38754 - 2.62456I$	$-7.08196 + 4.54676I$
$u = -0.457663$	-0.649936	-15.7110
$u = \quad 1.56051$	-7.66915	-13.9610
$u = \quad 1.61748 + 0.14016I$	$-4.07324 - 10.12930I$	$-8.75457 + 5.34263I$
$u = \quad 1.61748 - 0.14016I$	$-4.07324 + 10.12930I$	$-8.75457 - 5.34263I$
$u = -1.62065 + 0.12523I$	$-11.12620 + 7.24908I$	$-12.24142 - 6.12618I$
$u = -1.62065 - 0.12523I$	$-11.12620 - 7.24908I$	$-12.24142 + 6.12618I$
$u = \quad 1.62371 + 0.10809I$	$-11.61880 - 3.05167I$	$-13.64014 + 0.I$
$u = \quad 1.62371 - 0.10809I$	$-11.61880 + 3.05167I$	$-13.64014 + 0.I$
$u = -1.63057 + 0.08388I$	$-5.64869 + 0.25021I$	$-10.11180 + 0.I$
$u = -1.63057 - 0.08388I$	$-5.64869 - 0.25021I$	$-10.11180 + 0.I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6 c_7	$u^{30} - u^{29} + \cdots - u - 1$
c_3	$u^{30} - 9u^{29} + \cdots + 127u - 41$
c_4, c_5, c_9 c_{10}	$u^{30} + u^{29} + \cdots - 3u - 1$
c_8, c_{11}	$u^{30} + 5u^{29} + \cdots + 73u + 11$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_7	$y^{30} - 35y^{29} + \cdots - 5y + 1$
c_3	$y^{30} - 11y^{29} + \cdots - 17441y + 1681$
c_4, c_5, c_9 c_{10}	$y^{30} + 33y^{29} + \cdots - 5y + 1$
c_8, c_{11}	$y^{30} + 21y^{29} + \cdots - 3217y + 121$