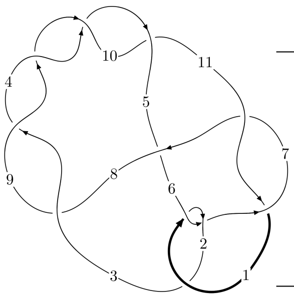
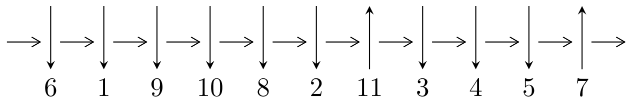
$11a_{203}$ ($K11a_{203}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{30} - 8u^{28} + \cdots + u + 1 \rangle$$
$$I_2^u = \langle u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 31 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. $I_1^u = \langle u^{30} - 8u^{28} + \cdots + u + 1\rangle$

(i) Arc colorings

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

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

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

$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^{14} + 3u^{12} - 4u^{10} + u^8 + 2u^6 - 2u^4 + 1 \\ u^{16} - 4u^{14} + 8u^{12} - 8u^{10} + 4u^8 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{14} + 3u^{12} - 4u^{10} + u^8 + 2u^6 - 2u^4 + 1 \\ u^{14} - 4u^{12} + 7u^{10} - 6u^8 + 2u^6 - u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^{25} + 6u^{23} + \cdots - 3u^5 + u \\ u^{25} - 7u^{23} + \cdots - 2u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{25} - 6u^{23} + \cdots + 3u^5 - u \\ -u^{27} + 7u^{25} + \cdots - u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{25} - 6u^{23} + \cdots + 3u^5 - u \\ -u^{27} + 7u^{25} + \cdots - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{29} + 32u^{27} - 4u^{26} - 124u^{25} + 28u^{24} + 284u^{23} - 96u^{22} - 400u^{21} + 192u^{20} + 300u^{19} - 232u^{18} - 4u^{17} + 140u^{16} - 224u^{15} + 12u^{14} + 188u^{13} - 84u^{12} - 28u^{11} + 40u^{10} - 52u^9 + 12u^8 + 32u^7 - 24u^6 - 8u^5 + 8u^4 + 4u^3 + 4u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{30} - 8u^{28} + \cdots + u + 1$
c_2	$u^{30} + 16u^{29} + \cdots + 3u + 1$
c_3, c_4, c_8 c_9, c_{10}	$u^{30} - 20u^{28} + \cdots + 3u + 1$
c_5	$u^{30} - 6u^{29} + \cdots + 23u + 41$
c_7, c_{11}	$u^{30} - 3u^{29} + \cdots + 37u - 11$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{30} - 16y^{29} + \cdots - 3y + 1$
c_2	$y^{30} - 4y^{29} + \cdots - 7y + 1$
c_3, c_4, c_8 c_9, c_{10}	$y^{30} - 40y^{29} + \cdots - 3y + 1$
c_5	$y^{30} - 16y^{29} + \cdots - 36527y + 1681$
c_7, c_{11}	$y^{30} + 27y^{29} + \cdots - 3129y + 121$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.887519 + 0.482432I$	$-1.82016 + 4.25744I$	$-10.93711 - 7.73976I$
$u = -0.887519 - 0.482432I$	$-1.82016 - 4.25744I$	$-10.93711 + 7.73976I$
$u = 0.935013 + 0.538460I$	$-10.87340 - 5.27966I$	$-12.05604 + 5.65823I$
$u = 0.935013 - 0.538460I$	$-10.87340 + 5.27966I$	$-12.05604 - 5.65823I$
$u = -1.09884$	-14.6811	-17.7740
$u = 0.778482 + 0.436098I$	$1.00011 - 1.87364I$	$-3.05909 + 5.26127I$
$u = 0.778482 - 0.436098I$	$1.00011 + 1.87364I$	$-3.05909 - 5.26127I$
$u = 0.113847 + 0.839746I$	$-15.0478 + 5.3499I$	$-12.97012 - 2.66295I$
$u = 0.113847 - 0.839746I$	$-15.0478 - 5.3499I$	$-12.97012 + 2.66295I$
$u = -0.100894 + 0.796851I$	$-5.17949 - 3.97369I$	$-12.30033 + 4.02503I$
$u = -0.100894 - 0.796851I$	$-5.17949 + 3.97369I$	$-12.30033 - 4.02503I$
$u = 0.523957 + 0.596828I$	$-9.71958 + 0.79768I$	$-9.60193 + 0.22241I$
$u = 0.523957 - 0.596828I$	$-9.71958 - 0.79768I$	$-9.60193 - 0.22241I$
$u = -1.175620 + 0.433898I$	$-4.54064 + 2.58760I$	$-11.91074 + 0.31463I$
$u = -1.175620 - 0.433898I$	$-4.54064 - 2.58760I$	$-11.91074 - 0.31463I$
$u = 1.178600 + 0.472961I$	$-4.25686 - 5.88582I$	$-10.73071 + 7.02338I$
$u = 1.178600 - 0.472961I$	$-4.25686 + 5.88582I$	$-10.73071 - 7.02338I$
$u = 1.209450 + 0.403071I$	$-9.06454 - 0.14928I$	$-16.5343 - 0.4492I$
$u = 1.209450 - 0.403071I$	$-9.06454 + 0.14928I$	$-16.5343 + 0.4492I$
$u = 0.064904 + 0.715291I$	$-1.08394 + 1.47244I$	$-7.45106 - 4.26447I$
$u = 0.064904 - 0.715291I$	$-1.08394 - 1.47244I$	$-7.45106 + 4.26447I$
$u = -0.551842 + 0.441212I$	$-0.931280 - 0.302386I$	$-8.66690 + 0.70064I$
$u = -0.551842 - 0.441212I$	$-0.931280 + 0.302386I$	$-8.66690 - 0.70064I$
$u = -1.236340 + 0.392586I$	$-19.1575 - 1.1230I$	$-17.1562 - 0.4196I$
$u = -1.236340 - 0.392586I$	$-19.1575 + 1.1230I$	$-17.1562 + 0.4196I$
$u = -1.198880 + 0.495938I$	$-8.40726 + 8.70507I$	$-15.2295 - 7.1454I$
$u = -1.198880 - 0.495938I$	$-8.40726 - 8.70507I$	$-15.2295 + 7.1454I$
$u = 1.212990 + 0.509772I$	$-18.3208 - 10.2613I$	$-15.9531 + 5.7696I$
$u = 1.212990 - 0.509772I$	$-18.3208 + 10.2613I$	$-15.9531 - 5.7696I$
$u = -0.633476$	-0.803448	-13.1110

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

(i) Arc colorings

$a_2 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

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

$a_6 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

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

$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_9 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

$a_5 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

$a_{10} = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

$a_4 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

$a_4 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -18$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_5, c_6 c_8, c_9, c_{10}	$y-1$
c_7, c_{11}	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_6	$(u-1)(u^{30}-8u^{28}+\cdots+u+1)$
c_2	$(u+1)(u^{30}+16u^{29}+\cdots+3u+1)$
c_3, c_4, c_8 c_9, c_{10}	$(u-1)(u^{30}-20u^{28}+\cdots+3u+1)$
c_5	$(u+1)(u^{30}-6u^{29}+\cdots+23u+41)$
c_7, c_{11}	$u(u^{30}-3u^{29}+\cdots+37u-11)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y-1)(y^{30} - 16y^{29} + \cdots - 3y + 1)$
c_2	$(y-1)(y^{30} - 4y^{29} + \cdots - 7y + 1)$
c_3, c_4, c_8 c_9, c_{10}	$(y-1)(y^{30} - 40y^{29} + \cdots - 3y + 1)$
c_5	$(y-1)(y^{30} - 16y^{29} + \cdots - 36527y + 1681)$
c_7, c_{11}	$y(y^{30} + 27y^{29} + \cdots - 3129y + 121)$