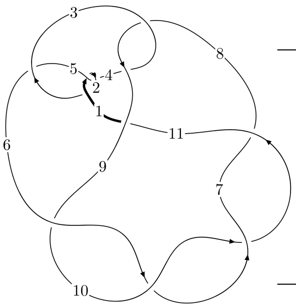
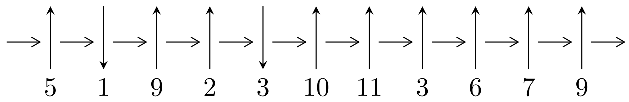
$11n_{14}$ ($K11n_{14}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -3u^{25} - 6u^{24} + \cdots + 2b - 7u,\ 7u^{25} + 14u^{24} + \cdots + 2a + 9u,\ u^{26} + 3u^{25} + \cdots + u - 1 \rangle$$
$$I_2^u = \langle b + a,\ a^2 - a + 1,\ u^2 - u - 1 \rangle$$

* 2 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. $I_1^u =$
$\langle -3u^{25} - 6u^{24} + \cdots + 2b - 7u,\ 7u^{25} + 14u^{24} + \cdots + 2a + 9u,\ u^{26} + 3u^{25} + \cdots + u - 1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{7}{2}u^{25} - 7u^{24} + \cdots - 2u^2 - \frac{9}{2}u \\ \frac{3}{2}u^{25} + 3u^{24} + \cdots + u^2 + \frac{7}{2}u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{1}{2}u^{25} + u^{24} + \cdots - 4u^2 - \frac{5}{2}u \\ -\frac{1}{2}u^{25} - u^{24} + \cdots + 4u^2 + \frac{1}{2}u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -\frac{13}{2}u^{25} - 12u^{24} + \cdots - \frac{17}{2}u + 2 \\ \frac{9}{2}u^{25} + 8u^{24} + \cdots + \frac{15}{2}u - 2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^5 + 2u^3 + u \\ u^5 - 3u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -6u^{25} - 10u^{24} + \cdots - 6u + 2 \\ \frac{11}{2}u^{25} + 9u^{24} + \cdots + \frac{15}{2}u - 2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{5}{2}u^{25} + 4u^{24} - \frac{57}{2}u^{23} - 41u^{22} + \frac{277}{2}u^{21} + \frac{305}{2}u^{20} - 391u^{19} - 205u^{18} + \frac{1475}{2}u^{17} - 141u^{16} - 910u^{15} + 742u^{14} + 464u^{13} - \frac{1721}{2}u^{12} + 374u^{11} + 381u^{10} - 512u^9 + 147u^8 + \frac{229}{2}u^7 - 247u^6 - \frac{49}{2}u^5 + \frac{29}{2}u^4 - 53u^3 - 27u^2 - \frac{29}{2}u + 9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{26} + 3u^{25} + \cdots - 3u + 1$
c_2	$u^{26} + 15u^{25} + \cdots - 23u + 1$
c_3, c_8	$u^{26} - u^{25} + \cdots + 16u - 16$
c_5	$u^{26} - 3u^{25} + \cdots - 11u + 2$
c_6, c_7, c_9 c_{10}	$u^{26} - 3u^{25} + \cdots - u - 1$
c_{11}	$u^{26} + 3u^{25} + \cdots + 3u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{26} + 15y^{25} + \cdots - 23y + 1$
c_2	$y^{26} - 5y^{25} + \cdots - 795y + 1$
c_3, c_8	$y^{26} + 25y^{25} + \cdots + 1664y + 256$
c_5	$y^{26} - 25y^{25} + \cdots + 7y + 4$
c_6, c_7, c_9 c_{10}	$y^{26} - 29y^{25} + \cdots - 19y + 1$
c_{11}	$y^{26} + 31y^{25} + \cdots - 19y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.608473 + 0.715807I$ $a = 0.153590 - 1.045830I$ $b = -1.73126 + 0.24397I$	$-7.73283 + 7.28919I$	$4.65018 - 5.96812I$
$u = 0.608473 - 0.715807I$ $a = 0.153590 + 1.045830I$ $b = -1.73126 - 0.24397I$	$-7.73283 - 7.28919I$	$4.65018 + 5.96812I$
$u = 0.433445 + 0.761836I$ $a = -0.011324 - 1.102790I$ $b = -1.56800 + 0.06124I$	$-8.25588 - 2.37235I$	$3.41364 + 0.56644I$
$u = 0.433445 - 0.761836I$ $a = -0.011324 + 1.102790I$ $b = -1.56800 - 0.06124I$	$-8.25588 + 2.37235I$	$3.41364 - 0.56644I$
$u = 0.514434 + 0.670493I$ $a = -0.106433 + 1.146570I$ $b = 1.59480 - 0.23303I$	$-4.15442 + 2.25820I$	$7.09524 - 3.00458I$
$u = 0.514434 - 0.670493I$ $a = -0.106433 - 1.146570I$ $b = 1.59480 + 0.23303I$	$-4.15442 - 2.25820I$	$7.09524 + 3.00458I$
$u = -0.730522 + 0.264601I$ $a = -0.408112 - 0.721539I$ $b = -0.020892 - 0.242346I$	$0.141642 - 0.491245I$	$7.19488 + 1.21216I$
$u = -0.730522 - 0.264601I$ $a = -0.408112 + 0.721539I$ $b = -0.020892 + 0.242346I$	$0.141642 + 0.491245I$	$7.19488 - 1.21216I$
$u = 1.42824 + 0.09847I$ $a = -0.332202 + 0.112416I$ $b = 1.191590 - 0.262632I$	$3.94867 + 3.99401I$	$9.09163 - 3.57778I$
$u = 1.42824 - 0.09847I$ $a = -0.332202 - 0.112416I$ $b = 1.191590 + 0.262632I$	$3.94867 - 3.99401I$	$9.09163 + 3.57778I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.47226 + 0.03460I$ $a = -0.29209 - 2.37542I$ $b = 0.36258 + 1.62911I$	$6.47513 - 2.78553I$	$10.00226 + 3.18308I$
$u = -1.47226 - 0.03460I$ $a = -0.29209 + 2.37542I$ $b = 0.36258 - 1.62911I$	$6.47513 + 2.78553I$	$10.00226 - 3.18308I$
$u = -1.45262 + 0.27035I$ $a = 0.87552 + 1.41378I$ $b = -1.239850 - 0.375242I$	$-2.20853 - 1.36342I$	$6.29553 + 0.38377I$
$u = -1.45262 - 0.27035I$ $a = 0.87552 - 1.41378I$ $b = -1.239850 + 0.375242I$	$-2.20853 + 1.36342I$	$6.29553 - 0.38377I$
$u = -0.230011 + 0.458848I$ $a = 0.727275 + 1.025970I$ $b = 0.536127 + 0.217517I$	$-1.40190 - 2.19157I$	$3.35211 + 5.42014I$
$u = -0.230011 - 0.458848I$ $a = 0.727275 - 1.025970I$ $b = 0.536127 - 0.217517I$	$-1.40190 + 2.19157I$	$3.35211 - 5.42014I$
$u = 1.49087$ $a = 0.257464$ $b = -0.956110$	7.14521	13.5410
$u = -1.52539 + 0.21566I$ $a = -1.11758 - 1.58851I$ $b = 1.54625 + 0.70491I$	$2.54423 - 5.47373I$	$10.67253 + 2.88121I$
$u = -1.52539 - 0.21566I$ $a = -1.11758 + 1.58851I$ $b = 1.54625 - 0.70491I$	$2.54423 + 5.47373I$	$10.67253 - 2.88121I$
$u = -0.448296$ $a = -0.791985$ $b = -0.195879$	0.706372	14.0850

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.56905 + 0.24097I$ $a = 1.25395 + 1.44166I$ $b = -1.78957 - 0.55743I$	$-0.54439 - 10.83970I$	$8.04696 + 6.04188I$
$u = -1.56905 - 0.24097I$ $a = 1.25395 - 1.44166I$ $b = -1.78957 + 0.55743I$	$-0.54439 + 10.83970I$	$8.04696 - 6.04188I$
$u = 1.63847 + 0.03227I$ $a = 0.0580399 - 0.1115770I$ $b = -0.266246 + 0.474227I$	$8.45818 + 1.37920I$	$7.00000 + 2.69707I$
$u = 1.63847 - 0.03227I$ $a = 0.0580399 + 0.1115770I$ $b = -0.266246 - 0.474227I$	$8.45818 - 1.37920I$	$7.00000 - 2.69707I$
$u = 0.335499 + 0.109869I$ $a = -0.03337 + 2.42886I$ $b = 0.460465 - 1.052830I$	$0.44924 + 2.24817I$	$0.24032 - 5.78182I$
$u = 0.335499 - 0.109869I$ $a = -0.03337 - 2.42886I$ $b = 0.460465 + 1.052830I$	$0.44924 - 2.24817I$	$0.24032 + 5.78182I$

II. $I_2^u = \langle b+a,\ a^2-a+1,\ u^2-u-1 \rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u-1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ -a \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ -u-1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} a \\ -a+1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a \\ -a \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0 \\ -a \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 2au + 3a - u + 12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5	$(u^2+u+1)^2$
c_3, c_8	u^4
c_4	$(u^2-u+1)^2$
c_6, c_7	$(u^2-u-1)^2$
c_9, c_{10}, c_{11}	$(u^2+u-1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_5	$(y^2 + y + 1)^2$
c_3, c_8	y^4
c_6, c_7, c_9 c_{10}, c_{11}	$(y^2 - 3y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.618034$ $a = \ \ 0.500000 + 0.866025I$ $b = -0.500000 - 0.866025I$	$0.98696 - 2.02988I$	$13.50000 + 1.52761I$
$u = -0.618034$ $a = \ \ 0.500000 - 0.866025I$ $b = -0.500000 + 0.866025I$	$0.98696 + 2.02988I$	$13.50000 - 1.52761I$
$u = \ \ 1.61803$ $a = \ \ 0.500000 + 0.866025I$ $b = -0.500000 - 0.866025I$	$8.88264 - 2.02988I$	$13.5000 + 5.4006I$
$u = \ \ 1.61803$ $a = \ \ 0.500000 - 0.866025I$ $b = -0.500000 + 0.866025I$	$8.88264 + 2.02988I$	$13.5000 - 5.4006I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2+u+1)^2)(u^{26}+3u^{25}+\cdots-3u+1)$
c_2	$((u^2+u+1)^2)(u^{26}+15u^{25}+\cdots-23u+1)$
c_3, c_8	$u^4(u^{26}-u^{25}+\cdots+16u-16)$
c_4	$((u^2-u+1)^2)(u^{26}+3u^{25}+\cdots-3u+1)$
c_5	$((u^2+u+1)^2)(u^{26}-3u^{25}+\cdots-11u+2)$
c_6, c_7	$((u^2-u-1)^2)(u^{26}-3u^{25}+\cdots-u-1)$
c_9, c_{10}	$((u^2+u-1)^2)(u^{26}-3u^{25}+\cdots-u-1)$
c_{11}	$((u^2+u-1)^2)(u^{26}+3u^{25}+\cdots+3u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y^2+y+1)^2)(y^{26}+15y^{25}+\cdots-23y+1)$
c_2	$((y^2+y+1)^2)(y^{26}-5y^{25}+\cdots-795y+1)$
c_3, c_8	$y^4(y^{26}+25y^{25}+\cdots+1664y+256)$
c_5	$((y^2+y+1)^2)(y^{26}-25y^{25}+\cdots+7y+4)$
c_6, c_7, c_9 c_{10}	$((y^2-3y+1)^2)(y^{26}-29y^{25}+\cdots-19y+1)$
c_{11}	$((y^2-3y+1)^2)(y^{26}+31y^{25}+\cdots-19y+1)$