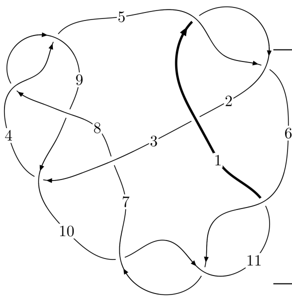
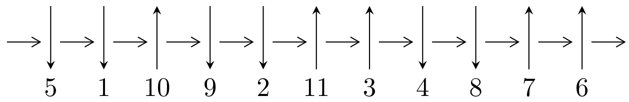
$11a_{111}$ ($K11a_{111}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{51} - u^{50} + \cdots + 2u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 51 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. $I_1^u = \langle u^{51} - u^{50} + \cdots + 2u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{14} - 3u^{12} + 4u^{10} - u^8 + 1 \\ -u^{16} + 4u^{14} - 8u^{12} + 8u^{10} - 4u^8 - 2u^6 + 4u^4 - 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^9 - 2u^7 + u^5 + 2u^3 - u \\ -u^9 + 3u^7 - 3u^5 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{23} - 6u^{21} + 16u^{19} - 20u^{17} + 4u^{15} + 22u^{13} - 26u^{11} + 6u^9 + 9u^7 - 6u^5 \\ -u^{23} + 7u^{21} + \cdots - 2u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{39} - 10u^{37} + \cdots - 7u^7 + 6u^5 \\ -u^{41} + 11u^{39} + \cdots - 2u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{39} - 10u^{37} + \cdots - 7u^7 + 6u^5 \\ -u^{41} + 11u^{39} + \cdots - 2u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{50} + 60u^{48} + \cdots + 4u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{51} + u^{50} + \cdots + 2u + 1$
c_2	$u^{51} + 29u^{50} + \cdots + 2u + 1$
c_3	$u^{51} - 3u^{50} + \cdots + 96u + 77$
c_4, c_8	$u^{51} - u^{50} + \cdots - u^2 + 1$
c_6, c_{10}, c_{11}	$u^{51} + 3u^{50} + \cdots + 38u + 5$
c_7	$u^{51} + u^{50} + \cdots - 15u^2 + 25$
c_9	$u^{51} + 25u^{50} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{51} - 29y^{50} + \cdots + 2y - 1$
c_2	$y^{51} - 13y^{50} + \cdots - 6y - 1$
c_3	$y^{51} + 19y^{50} + \cdots - 47918y - 5929$
c_4, c_8	$y^{51} - 25y^{50} + \cdots + 2y - 1$
c_6, c_{10}, c_{11}	$y^{51} + 55y^{50} + \cdots - 386y - 25$
c_7	$y^{51} + 7y^{50} + \cdots + 750y - 625$
c_9	$y^{51} + 3y^{50} + \cdots - 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.909027 + 0.447242I$	$0.92869 + 3.49340I$	$1.60875 - 7.12715I$
$u = -0.909027 - 0.447242I$	$0.92869 - 3.49340I$	$1.60875 + 7.12715I$
$u = \ \ 1.011050 + 0.194989I$	$-2.03194 - 0.41812I$	$-5.90669 + 0.63067I$
$u = \ \ 1.011050 - 0.194989I$	$-2.03194 + 0.41812I$	$-5.90669 - 0.63067I$
$u = \ \ 0.836766 + 0.445768I$	$-0.270561 + 0.850318I$	$-0.462815 + 0.737967I$
$u = \ \ 0.836766 - 0.445768I$	$-0.270561 - 0.850318I$	$-0.462815 - 0.737967I$
$u = -1.074180 + 0.167529I$	$-4.56731 - 3.82886I$	$-9.37121 + 3.42519I$
$u = -1.074180 - 0.167529I$	$-4.56731 + 3.82886I$	$-9.37121 - 3.42519I$
$u = -0.984457 + 0.470779I$	$-0.06113 + 5.08804I$	$-0.46068 - 6.66773I$
$u = -0.984457 - 0.470779I$	$-0.06113 - 5.08804I$	$-0.46068 + 6.66773I$
$u = -1.075750 + 0.257928I$	$-5.35579 + 3.64528I$	$-10.51815 - 4.55101I$
$u = -1.075750 - 0.257928I$	$-5.35579 - 3.64528I$	$-10.51815 + 4.55101I$
$u = \ \ 1.032300 + 0.426575I$	$-4.14364 - 2.64621I$	$-7.99299 + 4.07353I$
$u = \ \ 1.032300 - 0.426575I$	$-4.14364 + 2.64621I$	$-7.99299 - 4.07353I$
$u = \ \ 1.004620 + 0.490092I$	$-2.26947 - 9.85775I$	$-3.99323 + 10.36767I$
$u = \ \ 1.004620 - 0.490092I$	$-2.26947 + 9.85775I$	$-3.99323 - 10.36767I$
$u = \ \ 0.060601 + 0.870392I$	$-7.17725 + 8.76370I$	$-4.62718 - 5.86372I$
$u = \ \ 0.060601 - 0.870392I$	$-7.17725 - 8.76370I$	$-4.62718 + 5.86372I$
$u = \ \ 0.032672 + 0.871748I$	$-8.95121 + 0.59562I$	$-7.09212 + 0.32730I$
$u = \ \ 0.032672 - 0.871748I$	$-8.95121 - 0.59562I$	$-7.09212 - 0.32730I$
$u = -0.052236 + 0.858648I$	$-4.58264 - 3.82645I$	$-1.55259 + 2.33220I$
$u = -0.052236 - 0.858648I$	$-4.58264 + 3.82645I$	$-1.55259 - 2.33220I$
$u = \ \ 0.821385$	-1.34152	-6.99070
$u = -0.026625 + 0.803166I$	$-2.30918 - 2.29408I$	$-0.51230 + 3.47946I$
$u = -0.026625 - 0.803166I$	$-2.30918 + 2.29408I$	$-0.51230 - 3.47946I$
$u = \ \ 0.635709 + 0.474037I$	$0.27984 - 4.75284I$	$0.98705 + 6.79611I$
$u = \ \ 0.635709 - 0.474037I$	$0.27984 + 4.75284I$	$0.98705 - 6.79611I$
$u = -0.553405 + 0.447723I$	$1.91457 + 0.33323I$	$4.99514 - 0.71543I$
$u = -0.553405 - 0.447723I$	$1.91457 - 0.33323I$	$4.99514 + 0.71543I$
$u = \ \ 1.216530 + 0.449635I$	$-5.95571 - 2.15027I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.216530 - 0.449635I$	$-5.95571 + 2.15027I$	0
$u = -1.216530 + 0.469683I$	$-5.81085 + 6.89215I$	0
$u = -1.216530 - 0.469683I$	$-5.81085 - 6.89215I$	0
$u = 1.247240 + 0.434621I$	$-8.51754 - 0.71518I$	0
$u = 1.247240 - 0.434621I$	$-8.51754 + 0.71518I$	0
$u = 0.372815 + 0.567071I$	$-0.52649 + 5.64440I$	$-0.46144 - 5.74990I$
$u = 0.372815 - 0.567071I$	$-0.52649 - 5.64440I$	$-0.46144 + 5.74990I$
$u = -1.254950 + 0.430017I$	$-11.18690 - 4.20609I$	0
$u = -1.254950 - 0.430017I$	$-11.18690 + 4.20609I$	0
$u = -1.234600 + 0.488294I$	$-8.12762 + 8.67382I$	0
$u = -1.234600 - 0.488294I$	$-8.12762 - 8.67382I$	0
$u = -1.253400 + 0.446739I$	$-12.85550 + 4.06120I$	0
$u = -1.253400 - 0.446739I$	$-12.85550 - 4.06120I$	0
$u = 1.238160 + 0.494203I$	$-10.7190 - 13.6745I$	0
$u = 1.238160 - 0.494203I$	$-10.7190 + 13.6745I$	0
$u = 1.243900 + 0.481364I$	$-12.60200 - 5.44150I$	0
$u = 1.243900 - 0.481364I$	$-12.60200 + 5.44150I$	0
$u = -0.402436 + 0.501968I$	$1.52817 - 1.07520I$	$3.83656 + 1.33985I$
$u = -0.402436 - 0.501968I$	$1.52817 + 1.07520I$	$3.83656 - 1.33985I$
$u = 0.194561 + 0.529394I$	$-1.92663 - 1.10660I$	$-3.70247 + 0.77639I$
$u = 0.194561 - 0.529394I$	$-1.92663 + 1.10660I$	$-3.70247 - 0.77639I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{51} + u^{50} + \cdots + 2u + 1$
c_2	$u^{51} + 29u^{50} + \cdots + 2u + 1$
c_3	$u^{51} - 3u^{50} + \cdots + 96u + 77$
c_4, c_8	$u^{51} - u^{50} + \cdots - u^2 + 1$
c_6, c_{10}, c_{11}	$u^{51} + 3u^{50} + \cdots + 38u + 5$
c_7	$u^{51} + u^{50} + \cdots - 15u^2 + 25$
c_9	$u^{51} + 25u^{50} + \cdots + 2u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{51} - 29y^{50} + \cdots + 2y - 1$
c_2	$y^{51} - 13y^{50} + \cdots - 6y - 1$
c_3	$y^{51} + 19y^{50} + \cdots - 47918y - 5929$
c_4, c_8	$y^{51} - 25y^{50} + \cdots + 2y - 1$
c_6, c_{10}, c_{11}	$y^{51} + 55y^{50} + \cdots - 386y - 25$
c_7	$y^{51} + 7y^{50} + \cdots + 750y - 625$
c_9	$y^{51} + 3y^{50} + \cdots - 6y - 1$