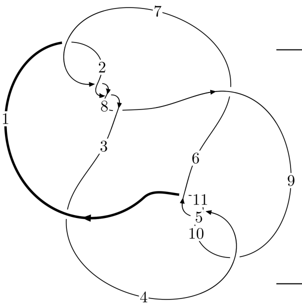
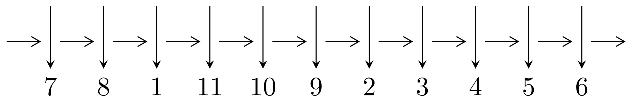
$11a_{335}$ ($K11a_{335}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{37} + u^{36} + \cdots - u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 37 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. $I_1^u = \langle u^{37} + u^{36} + \cdots - u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^5 - 2u^3 - u \\ u^5 - 3u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{14} - 7u^{12} + 16u^{10} - 11u^8 - 2u^6 - 2u^2 + 1 \\ u^{14} - 8u^{12} + 23u^{10} - 28u^8 + 14u^6 - 6u^4 + 3u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^6 + 3u^4 - 2u^2 + 1 \\ -u^8 + 4u^6 - 4u^4 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{36} + 19u^{34} + \cdots - 5u^2 + 1 \\ -u^{36} + 20u^{34} + \cdots + 46u^6 - 13u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{15} + 8u^{13} - 24u^{11} + 34u^9 - 26u^7 + 14u^5 - 4u^3 + 2u \\ -u^{17} + 9u^{15} - 31u^{13} + 50u^{11} - 37u^9 + 12u^7 - 4u^5 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{15} + 8u^{13} - 24u^{11} + 34u^9 - 26u^7 + 14u^5 - 4u^3 + 2u \\ -u^{17} + 9u^{15} - 31u^{13} + 50u^{11} - 37u^9 + 12u^7 - 4u^5 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{34} + 76u^{32} - 640u^{30} + 4u^{29} + 3140u^{28} - 64u^{27} - 9936u^{26} + 444u^{25} + 21272u^{24} - 1744u^{23} - 31696u^{22} + 4260u^{21} + 33924u^{20} - 6752u^{19} - 27600u^{18} + 7232u^{17} + 18308u^{16} - 5760u^{15} - 9996u^{14} + 3932u^{13} + 4396u^{12} - 2240u^{11} - 1720u^{10} + 976u^9 + 536u^8 - 448u^7 - 124u^6 + 140u^5 + 24u^4 - 36u^3 + 20u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8	$u^{37} + u^{36} + \cdots - u - 1$
c_3, c_6	$u^{37} - 7u^{36} + \cdots + u - 7$
c_4, c_5, c_{10}	$u^{37} + u^{36} + \cdots - 3u - 1$
c_9, c_{11}	$u^{37} - u^{36} + \cdots - 3u - 2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8	$y^{37} - 41y^{36} + \cdots + 11y - 1$
c_3, c_6	$y^{37} + 19y^{36} + \cdots + 239y - 49$
c_4, c_5, c_{10}	$y^{37} + 31y^{36} + \cdots + 11y - 1$
c_9, c_{11}	$y^{37} - 21y^{36} + \cdots + 41y - 4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.602666 + 0.566356I$	$3.41113 - 9.03749I$	$-9.15046 + 8.29355I$
$u = \quad 0.602666 - 0.566356I$	$3.41113 + 9.03749I$	$-9.15046 - 8.29355I$
$u = -0.801510 + 0.100864I$	$-0.75596 + 3.77593I$	$-14.9240 - 4.3419I$
$u = -0.801510 - 0.100864I$	$-0.75596 - 3.77593I$	$-14.9240 + 4.3419I$
$u = -0.601221 + 0.535743I$	$-1.30987 + 5.10979I$	$-14.0141 - 6.9625I$
$u = -0.601221 - 0.535743I$	$-1.30987 - 5.10979I$	$-14.0141 + 6.9625I$
$u = \quad 0.798272$	-4.65627	-19.8710
$u = -0.487866 + 0.583035I$	$7.89022 + 1.99397I$	$-4.51029 - 3.60908I$
$u = -0.487866 - 0.583035I$	$7.89022 - 1.99397I$	$-4.51029 + 3.60908I$
$u = \quad 0.593447 + 0.468250I$	$1.51106 - 1.30299I$	$-11.08606 + 3.41779I$
$u = \quad 0.593447 - 0.468250I$	$1.51106 + 1.30299I$	$-11.08606 - 3.41779I$
$u = \quad 0.349527 + 0.599396I$	$4.15088 + 5.05582I$	$-6.99986 - 2.20493I$
$u = \quad 0.349527 - 0.599396I$	$4.15088 - 5.05582I$	$-6.99986 + 2.20493I$
$u = \quad 0.475022 + 0.478306I$	$1.72361 - 1.67469I$	$-8.06184 + 5.20256I$
$u = \quad 0.475022 - 0.478306I$	$1.72361 + 1.67469I$	$-8.06184 - 5.20256I$
$u = -0.330514 + 0.550465I$	$-0.53120 - 1.35599I$	$-11.83231 + 0.62165I$
$u = -0.330514 - 0.550465I$	$-0.53120 + 1.35599I$	$-11.83231 - 0.62165I$
$u = -1.43981 + 0.10188I$	$-1.46648 - 2.68282I$	$-10.45967 + 0.I$
$u = -1.43981 - 0.10188I$	$-1.46648 + 2.68282I$	$-10.45967 + 0.I$
$u = \quad 0.202017 + 0.475850I$	$2.54473 - 1.90283I$	$-7.07864 + 3.49708I$
$u = \quad 0.202017 - 0.475850I$	$2.54473 + 1.90283I$	$-7.07864 - 3.49708I$
$u = \quad 1.48943 + 0.07957I$	$-6.30817 - 0.50143I$	$-15.7929 + 0.I$
$u = \quad 1.48943 - 0.07957I$	$-6.30817 + 0.50143I$	$-15.7929 + 0.I$
$u = \quad 1.51213 + 0.16185I$	$1.30989 - 4.63234I$	0
$u = \quad 1.51213 - 0.16185I$	$1.30989 + 4.63234I$	0
$u = -1.52555 + 0.12217I$	$-4.95014 + 3.74741I$	0
$u = -1.52555 - 0.12217I$	$-4.95014 - 3.74741I$	0
$u = -1.56321 + 0.13997I$	$-5.73875 + 3.53679I$	0
$u = -1.56321 - 0.13997I$	$-5.73875 - 3.53679I$	0
$u = \quad 1.56555 + 0.15892I$	$-8.57063 - 7.64850I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.56555 - 0.15892I$	$-8.57063 + 7.64850I$	0
$u = -1.56495 + 0.17025I$	$-3.83357 + 11.73380I$	0
$u = -1.56495 - 0.17025I$	$-3.83357 - 11.73380I$	0
$u = -1.60055$	-12.7836	0
$u = \quad 1.60063 + 0.01829I$	$-8.89081 - 4.15452I$	0
$u = \quad 1.60063 - 0.01829I$	$-8.89081 + 4.15452I$	0
$u = -0.349317$	-0.504726	-19.7380

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_8	$u^{37} + u^{36} + \cdots - u - 1$
c_3, c_6	$u^{37} - 7u^{36} + \cdots + u - 7$
c_4, c_5, c_{10}	$u^{37} + u^{36} + \cdots - 3u - 1$
c_9, c_{11}	$u^{37} - u^{36} + \cdots - 3u - 2$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8	$y^{37} - 41y^{36} + \cdots + 11y - 1$
c_3, c_6	$y^{37} + 19y^{36} + \cdots + 239y - 49$
c_4, c_5, c_{10}	$y^{37} + 31y^{36} + \cdots + 11y - 1$
c_9, c_{11}	$y^{37} - 21y^{36} + \cdots + 41y - 4$