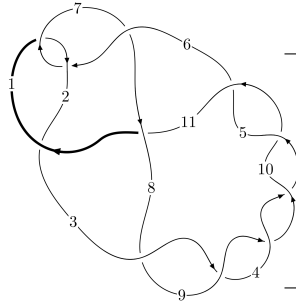
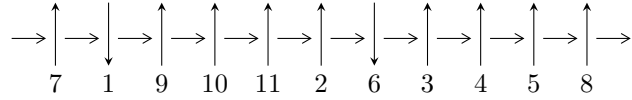


11a₂₀₆ (K11a₂₀₆)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle u^{23} + u^{22} + \dots - 2u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 23 representations.

¹The 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>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\text{I. } I_1^u = \langle u^{23} + u^{22} + \dots - 2u + 1 \rangle$$

(i) Arc colorings

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

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

$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^2 + 1 \\ u^4 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^9 + 2u^7 + 3u^5 + 2u^3 + u \\ u^{11} + u^9 + 2u^7 + u^5 + u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{16} - 3u^{14} - 7u^{12} - 10u^{10} - 11u^8 - 8u^6 - 4u^4 + 1 \\ -u^{18} - 2u^{16} - 5u^{14} - 6u^{12} - 7u^{10} - 6u^8 - 4u^6 - 2u^4 - u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^8 - u^6 - u^4 + 1 \\ u^8 + 2u^6 + 2u^4 + 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^{15} + 2u^{13} + 4u^{11} + 4u^9 + 2u^7 - 2u^3 - 2u \\ -u^{15} - 3u^{13} - 6u^{11} - 9u^9 - 8u^7 - 6u^5 - 2u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{22} + 3u^{20} + \dots - 2u^2 + 1 \\ -u^{22} - 4u^{20} + \dots + 2u^4 + 3u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{22} + 3u^{20} + \dots - 2u^2 + 1 \\ -u^{22} - 4u^{20} + \dots + 2u^4 + 3u^2 \end{pmatrix}$$

(ii) Obstruction class = -1

$$\text{(iii) Cusp Shapes} = -4u^{21} - 4u^{20} - 12u^{19} - 12u^{18} - 36u^{17} - 32u^{16} - 60u^{15} - 52u^{14} - 88u^{13} - 64u^{12} - 88u^{11} - 60u^{10} - 68u^9 - 32u^8 - 28u^7 - 4u^6 + 12u^4 + 16u^3 + 16u^2 + 4u + 14$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{23} + u^{22} + \dots - 2u + 1$
c_2, c_7	$u^{23} + 7u^{22} + \dots + 8u - 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$u^{23} + u^{22} + \dots - 4u^2 + 1$
c_{11}	$u^{23} - 5u^{22} + \dots - 136u + 39$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{23} + 7y^{22} + \dots + 8y - 1$
c_2, c_7	$y^{23} + 19y^{22} + \dots + 116y - 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$y^{23} - 33y^{22} + \dots + 8y - 1$
c_{11}	$y^{23} - 13y^{22} + \dots + 17092y - 1521$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.227985 + 0.971221I$	$2.66448 - 2.76032I$	$9.49755 + 4.44807I$
$u = -0.227985 - 0.971221I$	$2.66448 + 2.76032I$	$9.49755 - 4.44807I$
$u = -0.731982 + 0.784107I$	$3.25860 - 0.02327I$	$13.38062 - 2.15520I$
$u = -0.731982 - 0.784107I$	$3.25860 + 0.02327I$	$13.38062 + 2.15520I$
$u = 0.268514 + 1.049110I$	$13.20350 + 3.30165I$	$10.15005 - 3.37633I$
$u = 0.268514 - 1.049110I$	$13.20350 - 3.30165I$	$10.15005 + 3.37633I$
$u = 0.078829 + 0.893980I$	$-1.87270 + 1.23334I$	$3.38642 - 5.87652I$
$u = 0.078829 - 0.893980I$	$-1.87270 - 1.23334I$	$3.38642 + 5.87652I$
$u = 0.683177 + 0.873071I$	$1.27817 + 2.63439I$	$7.17328 - 2.59344I$
$u = 0.683177 - 0.873071I$	$1.27817 - 2.63439I$	$7.17328 + 2.59344I$
$u = 0.815519 + 0.753290I$	$9.35127 - 1.67104I$	$15.7595 + 0.7836I$
$u = 0.815519 - 0.753290I$	$9.35127 + 1.67104I$	$15.7595 - 0.7836I$
$u = -0.862702 + 0.746175I$	$-18.8163 + 2.5543I$	$15.9877 - 0.1490I$
$u = -0.862702 - 0.746175I$	$-18.8163 - 2.5543I$	$15.9877 + 0.1490I$
$u = -0.714154 + 0.939346I$	$2.78784 - 5.50013I$	$11.6998 + 7.9457I$
$u = -0.714154 - 0.939346I$	$2.78784 + 5.50013I$	$11.6998 - 7.9457I$
$u = 0.749494 + 0.981641I$	$8.65288 + 7.54251I$	$14.3885 - 6.0343I$
$u = 0.749494 - 0.981641I$	$8.65288 - 7.54251I$	$14.3885 + 6.0343I$
$u = -0.769773 + 1.006750I$	$-19.6232 - 8.6288I$	$14.6907 + 4.9949I$
$u = -0.769773 - 1.006750I$	$-19.6232 + 8.6288I$	$14.6907 - 4.9949I$
$u = 0.723840$	16.6303	16.0670
$u = -0.612110$	5.70319	16.3480
$u = 0.310396$	0.571551	17.3560

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{23} + u^{22} + \dots - 2u + 1$
c_2, c_7	$u^{23} + 7u^{22} + \dots + 8u - 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$u^{23} + u^{22} + \dots - 4u^2 + 1$
c_{11}	$u^{23} - 5u^{22} + \dots - 136u + 39$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{23} + 7y^{22} + \dots + 8y - 1$
c_2, c_7	$y^{23} + 19y^{22} + \dots + 116y - 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$y^{23} - 33y^{22} + \dots + 8y - 1$
c_{11}	$y^{23} - 13y^{22} + \dots + 17092y - 1521$