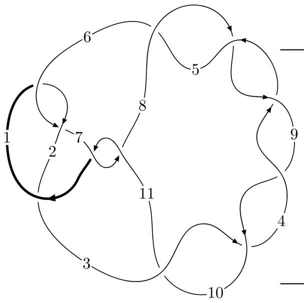
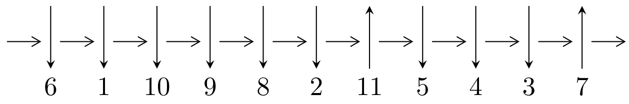
$11a_{230}$ ($K11a_{230}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{25} + u^{24} + \cdots - u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 25 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. $I_1^u = \langle u^{25} + u^{24} + \cdots - u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{14} + 3u^{12} - 4u^{10} + u^8 + 2u^6 - 2u^4 + 1 \\ u^{14} - 4u^{12} + 7u^{10} - 6u^8 + 2u^6 - u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{11} - 2u^9 + 2u^7 + u^3 \\ -u^{13} + 3u^{11} - 5u^9 + 4u^7 - 2u^5 - u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{19} + 4u^{17} - 8u^{15} + 8u^{13} - 5u^{11} + 2u^9 - 2u^7 - u^3 \\ u^{21} - 5u^{19} + 13u^{17} - 20u^{15} + 20u^{13} - 11u^{11} + u^9 + 4u^7 - u^5 - u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{22} - 5u^{20} + 12u^{18} - 15u^{16} + 8u^{14} + 4u^{12} - 8u^{10} + 3u^8 + 3u^6 - 3u^4 + 1 \\ -u^{22} + 6u^{20} + \cdots + 2u^4 - u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{22} - 5u^{20} + 12u^{18} - 15u^{16} + 8u^{14} + 4u^{12} - 8u^{10} + 3u^8 + 3u^6 - 3u^4 + 1 \\ -u^{22} + 6u^{20} + \cdots + 2u^4 - u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -4u^{23} + 24u^{21} + 4u^{20} - 72u^{19} - 20u^{18} + 124u^{17} + 48u^{16} - 128u^{15} - 60u^{14} + 64u^{13} + 36u^{12} - 16u^9 - 4u^8 - 8u^7 - 8u^6 + 16u^5 + 12u^4 - 16u^3 - 4u^2 - 4u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{25} - u^{24} + \cdots - u + 1$
c_2	$u^{25} + 13u^{24} + \cdots + u + 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$u^{25} - u^{24} + \cdots + u + 1$
c_7, c_{11}	$u^{25} - 3u^{24} + \cdots - 7u + 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{25} - 13y^{24} + \cdots + y - 1$
c_2	$y^{25} - y^{24} + \cdots + 13y - 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$y^{25} + 35y^{24} + \cdots + y - 1$
c_7, c_{11}	$y^{25} + 15y^{24} + \cdots + 241y - 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.779045+0.639863I$	$17.3947+2.4684I$	$0.82696-3.09489I$
$u=-0.779045-0.639863I$	$17.3947-2.4684I$	$0.82696+3.09489I$
$u=\ \ 0.763751+0.563111I$	$6.42429-2.24483I$	$0.87739+3.73001I$
$u=\ \ 0.763751-0.563111I$	$6.42429+2.24483I$	$0.87739-3.73001I$
$u=-0.245615+0.802005I$	$14.6751-4.2594I$	$-0.24448+2.05504I$
$u=-0.245615-0.802005I$	$14.6751+4.2594I$	$-0.24448-2.05504I$
$u=-0.738513+0.360257I$	$0.77592+1.63253I$	$-1.50081-6.32590I$
$u=-0.738513-0.360257I$	$0.77592-1.63253I$	$-1.50081+6.32590I$
$u=-1.143530+0.340046I$	$0.133925+0.085472I$	$-5.86002+0.34875I$
$u=-1.143530-0.340046I$	$0.133925-0.085472I$	$-5.86002-0.34875I$
$u=\ \ 1.140980+0.421501I$	$-3.95366-2.40561I$	$-10.55936+0.02824I$
$u=\ \ 1.140980-0.421501I$	$-3.95366+2.40561I$	$-10.55936-0.02824I$
$u=\ \ 1.189550+0.291950I$	$10.21240+0.84057I$	$-5.43221+0.40339I$
$u=\ \ 1.189550-0.291950I$	$10.21240-0.84057I$	$-5.43221-0.40339I$
$u=\ \ 0.212747+0.739529I$	$4.10003+3.28234I$	$-0.69331-3.26169I$
$u=\ \ 0.212747-0.739529I$	$4.10003-3.28234I$	$-0.69331+3.26169I$
$u=-1.147100+0.473379I$	$-3.57874+5.59583I$	$-8.74632-7.67577I$
$u=-1.147100-0.473379I$	$-3.57874-5.59583I$	$-8.74632+7.67577I$
$u=\ \ 1.153710+0.519862I$	$1.36392-8.01588I$	$-4.14152+6.75012I$
$u=\ \ 1.153710-0.519862I$	$1.36392+8.01588I$	$-4.14152-6.75012I$
$u=-1.164700+0.548434I$	$11.9587+9.2744I$	$-3.33794-5.54787I$
$u=-1.164700-0.548434I$	$11.9587-9.2744I$	$-3.33794+5.54787I$
$u=\ \ 0.712530$	-0.882258	-12.9060
$u=-0.098501+0.642338I$	$-0.67035-1.33734I$	$-5.73536+4.96479I$
$u=-0.098501-0.642338I$	$-0.67035+1.33734I$	$-5.73536-4.96479I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{25} - u^{24} + \cdots - u + 1$
c_2	$u^{25} + 13u^{24} + \cdots + u + 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$u^{25} - u^{24} + \cdots + u + 1$
c_7, c_{11}	$u^{25} - 3u^{24} + \cdots - 7u + 8$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{25} - 13y^{24} + \cdots + y - 1$
c_2	$y^{25} - y^{24} + \cdots + 13y - 1$
c_3, c_4, c_5 c_8, c_9, c_{10}	$y^{25} + 35y^{24} + \cdots + y - 1$
c_7, c_{11}	$y^{25} + 15y^{24} + \cdots + 241y - 64$