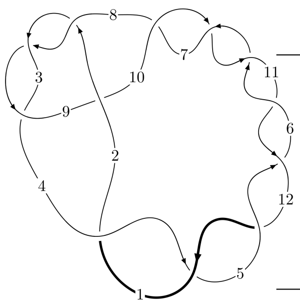
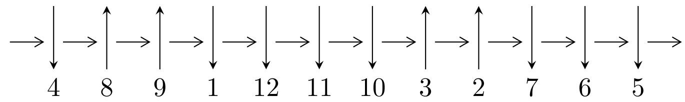
$12a_{1149}$ ($K12a_{1149}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$6{,}12 \xrightarrow[c_5]{} 5 \xrightarrow[c_{12}]{} 1 \xrightarrow[c_4]{} 4 \xrightarrow[c_1]{} 2 \xrightarrow[c_{11}]{} 11 \xrightarrow[c_6]{} 7 \xrightarrow[c_{10}]{} 10 \xrightarrow[c_7]{} 8 \xrightarrow[c_9]{} 9 \xrightarrow[c_3]{} 3 \gg c_2, c_8$$

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

$$I_1^u = \langle u^{17} - u^{16} + \cdots + u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 17 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. $\boldsymbol{I_1^u = \langle u^{17} - u^{16} + 14u^{15} - 13u^{14} + 79u^{13} - 67u^{12} + 230u^{11} - 174u^{10} + 367u^9 - 239u^8 + 314u^7 - 166u^6 + 130u^5 - 50u^4 + 20u^3 - 4u^2 + u - 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^3 - 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^3 + 2u \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^4 + 3u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^{11} - 8u^9 - 22u^7 - 24u^5 - 7u^3 + 2u \\ u^{13} + 9u^{11} + 29u^9 + 40u^7 + 22u^5 + 5u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^{13} + 10u^{11} + 37u^9 + 62u^7 + 46u^5 + 12u^3 - u \\ u^{13} + 9u^{11} + 29u^9 + 40u^7 + 22u^5 + 5u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{15} + 4u^{14} - 52u^{13} + 48u^{12} - 268u^{11} + 224u^{10} - 696u^9 + 512u^8 - 956u^7 + 592u^6 - 664u^5 + 320u^4 - 200u^3 + 64u^2 - 16u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_5 c_6, c_7, c_{10} c_{11}, c_{12}	$u^{17} - u^{16} + \cdots + u - 1$
c_2, c_3, c_8	$u^{17} - u^{16} + \cdots + u - 1$
c_9	$u^{17} + 3u^{16} + \cdots + u + 21$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_5 c_6, c_7, c_{10} c_{11}, c_{12}	$y^{17} + 27y^{16} + \cdots - 7y - 1$
c_2, c_3, c_8	$y^{17} - 17y^{16} + \cdots - 7y - 1$
c_9	$y^{17} - 13y^{16} + \cdots + 337y - 441$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.194186 + 1.026040I$	$9.51893 - 4.23374I$	$7.14792 + 4.22195I$
$u = 0.194186 - 1.026040I$	$9.51893 + 4.23374I$	$7.14792 - 4.22195I$
$u = -0.091284 + 0.918950I$	$3.67358 + 1.70231I$	$3.75454 - 4.66095I$
$u = -0.091284 - 0.918950I$	$3.67358 - 1.70231I$	$3.75454 + 4.66095I$
$u = 0.338270 + 0.473429I$	$4.74216 - 2.44497I$	$4.10899 + 5.90559I$
$u = 0.338270 - 0.473429I$	$4.74216 + 2.44497I$	$4.10899 - 5.90559I$
$u = -0.03492 + 1.49263I$	$11.95880 + 2.17105I$	$4.25105 - 3.15879I$
$u = -0.03492 - 1.49263I$	$11.95880 - 2.17105I$	$4.25105 + 3.15879I$
$u = 0.08539 + 1.53439I$	$18.3384 - 5.3421I$	$7.54765 + 3.11558I$
$u = 0.08539 - 1.53439I$	$18.3384 + 5.3421I$	$7.54765 - 3.11558I$
$u = 0.414876$	3.31379	-1.37510
$u = -0.212139 + 0.269969I$	$-0.099174 + 0.746479I$	$-3.08956 - 9.26969I$
$u = -0.212139 - 0.269969I$	$-0.099174 - 0.746479I$	$-3.08956 + 9.26969I$
$u = -0.00824 + 1.86916I$	$-14.6439 + 2.4029I$	$4.39001 - 2.67089I$
$u = -0.00824 - 1.86916I$	$-14.6439 - 2.4029I$	$4.39001 + 2.67089I$
$u = 0.02129 + 1.87890I$	$-8.00423 - 5.94574I$	$7.57693 + 2.66715I$
$u = 0.02129 - 1.87890I$	$-8.00423 + 5.94574I$	$7.57693 - 2.66715I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4, c_5 c_6, c_7, c_{10} c_{11}, c_{12}	$u^{17} - u^{16} + \cdots + u - 1$
c_2, c_3, c_8	$u^{17} - u^{16} + \cdots + u - 1$
c_9	$u^{17} + 3u^{16} + \cdots + u + 21$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_5 c_6, c_7, c_{10} c_{11}, c_{12}	$y^{17} + 27y^{16} + \cdots - 7y - 1$
c_2, c_3, c_8	$y^{17} - 17y^{16} + \cdots - 7y - 1$
c_9	$y^{17} - 13y^{16} + \cdots + 337y - 441$