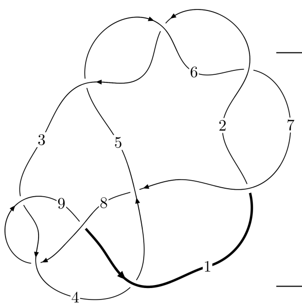
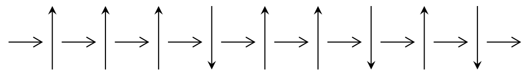
9_{14} ($K9a_{17}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{18} - u^{17} + \cdots - u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 18 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. $\boldsymbol{I_1^u = \langle u^{18} - u^{17} + 11u^{16} - 10u^{15} + 48u^{14} - 39u^{13} + 105u^{12} - 74u^{11} + 121u^{10} - 71u^9 + 75u^8 - 38u^7 + 30u^6 - 18u^5 + 8u^4 - 4u^3 + u^2 - u + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^5 - 2u^3 + u \\ u^5 + 3u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^7 + 4u^5 + 4u^3 \\ u^9 + 5u^7 + 7u^5 + 2u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{14} + 7u^{12} + 16u^{10} + 11u^8 - 2u^6 + 1 \\ -u^{14} - 8u^{12} - 23u^{10} - 28u^8 - 14u^6 - 4u^4 + u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{14} + 7u^{12} + 16u^{10} + 11u^8 - 2u^6 + 1 \\ -u^{14} - 8u^{12} - 23u^{10} - 28u^8 - 14u^6 - 4u^4 + u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{16} + 4u^{15} - 40u^{14} + 36u^{13} - 156u^{12} + 124u^{11} - 296u^{10} + 204u^9 - 280u^8 + 172u^7 - 132u^6 + 92u^5 - 44u^4 + 40u^3 - 8u^2 + 4u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5 c_6	$u^{18} + u^{17} + \cdots + u + 1$
c_3, c_8	$u^{18} - u^{17} + \cdots - u + 1$
c_4	$u^{18} + u^{17} + \cdots + u + 5$
c_7	$u^{18} - 5u^{17} + \cdots - 13u + 3$
c_9	$u^{18} + 9u^{17} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_6	$y^{18} + 21y^{17} + \cdots + y + 1$
c_3, c_8	$y^{18} + 9y^{17} + \cdots + y + 1$
c_4	$y^{18} - 7y^{17} + \cdots - 91y + 25$
c_7	$y^{18} - 3y^{17} + \cdots + 5y + 9$
c_9	$y^{18} + y^{17} + \cdots + 9y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.480218 + 0.701439I$	$-2.17182 + 6.64525I$	$-0.64041 - 7.71274I$
$u = 0.480218 - 0.701439I$	$-2.17182 - 6.64525I$	$-0.64041 + 7.71274I$
$u = 0.260166 + 0.780385I$	$-3.58935 - 0.58479I$	$-4.18494 - 0.42463I$
$u = 0.260166 - 0.780385I$	$-3.58935 + 0.58479I$	$-4.18494 + 0.42463I$
$u = -0.417636 + 0.610136I$	$0.09541 - 2.06052I$	$3.02279 + 4.27827I$
$u = -0.417636 - 0.610136I$	$0.09541 + 2.06052I$	$3.02279 - 4.27827I$
$u = 0.554520 + 0.161487I$	$-0.60821 - 3.09151I$	$3.11493 + 2.77317I$
$u = 0.554520 - 0.161487I$	$-0.60821 + 3.09151I$	$3.11493 - 2.77317I$
$u = -0.434512 + 0.328358I$	$0.917728 - 0.973282I$	$6.11395 + 4.55184I$
$u = -0.434512 - 0.328358I$	$0.917728 + 0.973282I$	$6.11395 - 4.55184I$
$u = -0.04262 + 1.48330I$	$-4.94755 - 2.36433I$	$0.96106 + 3.34702I$
$u = -0.04262 - 1.48330I$	$-4.94755 + 2.36433I$	$0.96106 - 3.34702I$
$u = -0.11549 + 1.58311I$	$-7.37756 - 3.98828I$	$0.01934 + 2.30410I$
$u = -0.11549 - 1.58311I$	$-7.37756 + 3.98828I$	$0.01934 - 2.30410I$
$u = 0.13939 + 1.60559I$	$-10.00660 + 8.95499I$	$-3.02415 - 5.84784I$
$u = 0.13939 - 1.60559I$	$-10.00660 - 8.95499I$	$-3.02415 + 5.84784I$
$u = 0.07596 + 1.61798I$	$-11.79050 + 0.69909I$	$-5.38255 + 0.31146I$
$u = 0.07596 - 1.61798I$	$-11.79050 - 0.69909I$	$-5.38255 - 0.31146I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5 c_6	$u^{18} + u^{17} + \cdots + u + 1$
c_3, c_8	$u^{18} - u^{17} + \cdots - u + 1$
c_4	$u^{18} + u^{17} + \cdots + u + 5$
c_7	$u^{18} - 5u^{17} + \cdots - 13u + 3$
c_9	$u^{18} + 9u^{17} + \cdots + u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_6	$y^{18} + 21y^{17} + \cdots + y + 1$
c_3, c_8	$y^{18} + 9y^{17} + \cdots + y + 1$
c_4	$y^{18} - 7y^{17} + \cdots - 91y + 25$
c_7	$y^{18} - 3y^{17} + \cdots + 5y + 9$
c_9	$y^{18} + y^{17} + \cdots + 9y + 1$