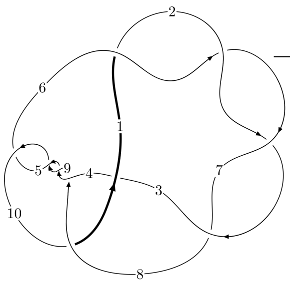
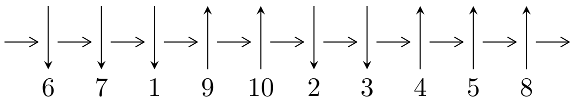
10_{17} $(K10a_{107})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{20} + u^{19} + \cdots - u^2 + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 20 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.

$$\boldsymbol{I_1^u = \langle u^{20} + u^{19} - 11u^{18} - 10u^{17} + 49u^{16} + 38u^{15} - 114u^{14} - 66u^{13} + 152u^{12} + 47u^{11} - 125u^{10} - 4u^9 + 67u^8 - 8u^7 - 20u^6 + 10u^5 + 5u^4 - 3u^3 - u^2 + 1\rangle}$$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^5 - 2u^3 - u \\ u^5 - 3u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^7 - 4u^5 + 4u^3 \\ u^9 - 5u^7 + 7u^5 - 2u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^{16} - 9u^{14} + 31u^{12} - 50u^{10} + 37u^8 - 12u^6 + 4u^4 + 1 \\ u^{18} - 10u^{16} + 39u^{14} - 74u^{12} + 71u^{10} - 38u^8 + 18u^6 - 4u^4 + u^2 \end{pmatrix}$$

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{18} - 44u^{16} + 192u^{14} - 4u^{13} - 420u^{12} + 32u^{11} + 484u^{10} - 92u^9 - 296u^8 + 112u^7 + 100u^6 - 56u^5 - 4u^4 + 20u^3 - 4u^2 - 4u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6 c_7	$u^{20} - u^{19} + \cdots - u^2 + 1$
c_3	$u^{20} - 5u^{19} + \cdots + 4u + 1$
c_4, c_5, c_8 c_9	$u^{20} + u^{19} + \cdots - u^2 + 1$
c_{10}	$u^{20} + 5u^{19} + \cdots - 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_5, c_6, c_7 c_8, c_9	$y^{20} - 23y^{19} + \cdots - 2y + 1$
c_3, c_{10}	$y^{20} + y^{19} + \cdots - 46y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.886444$	4.43265	-0.716390
$u = \quad 0.653943 + 0.534643I$	$7.54354 - 5.98288I$	$2.92800 + 5.90364I$
$u = \quad 0.653943 - 0.534643I$	$7.54354 + 5.98288I$	$2.92800 - 5.90364I$
$u = -0.638615 + 0.441759I$	$3.91005I$	$0. - 8.23335I$
$u = -0.638615 - 0.441759I$	$- 3.91005I$	$0. + 8.23335I$
$u = \quad 0.613121 + 0.271451I$	$-1.152210 - 0.756271I$	$-5.04397 + 1.60900I$
$u = \quad 0.613121 - 0.271451I$	$-1.152210 + 0.756271I$	$-5.04397 - 1.60900I$
$u = \quad 0.265798 + 0.599404I$	$8.68051 + 2.11373I$	$5.79765 - 0.04379I$
$u = \quad 0.265798 - 0.599404I$	$8.68051 - 2.11373I$	$5.79765 + 0.04379I$
$u = -1.38695$	3.92816	1.96120
$u = -0.232031 + 0.442395I$	$1.152210 - 0.756271I$	$5.04397 + 1.60900I$
$u = -0.232031 - 0.442395I$	$1.152210 + 0.756271I$	$5.04397 - 1.60900I$
$u = \quad 1.51222$	-4.43265	0.716390
$u = -1.58303 + 0.08477I$	$-8.68051 + 2.11373I$	$-5.79765 - 0.04379I$
$u = -1.58303 - 0.08477I$	$-8.68051 - 2.11373I$	$-5.79765 + 0.04379I$
$u = \quad 1.58517 + 0.12489I$	$-7.54354 - 5.98288I$	$-2.92800 + 5.90364I$
$u = \quad 1.58517 - 0.12489I$	$-7.54354 + 5.98288I$	$-2.92800 - 5.90364I$
$u = -1.58631 + 0.15748I$	$8.53676I$	$0. - 4.57594I$
$u = -1.58631 - 0.15748I$	$- 8.53676I$	$0. + 4.57594I$
$u = \quad 1.60509$	-3.92816	-1.96120

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6 c_7	$u^{20} - u^{19} + \cdots - u^2 + 1$
c_3	$u^{20} - 5u^{19} + \cdots + 4u + 1$
c_4, c_5, c_8 c_9	$u^{20} + u^{19} + \cdots - u^2 + 1$
c_{10}	$u^{20} + 5u^{19} + \cdots - 4u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_5, c_6, c_7 c_8, c_9	$y^{20} - 23y^{19} + \cdots - 2y + 1$
c_3, c_{10}	$y^{20} + y^{19} + \cdots - 46y + 1$