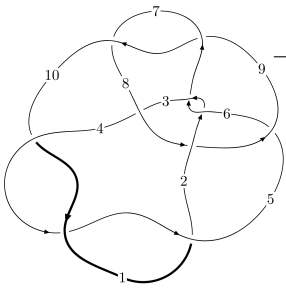
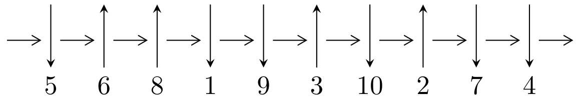
10_{94} $(K10a_{91})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I^u_1 = \langle &-9.74096 \times 10^{15} u^{34} + 8.22209 \times 10^{17} u^{33} + \cdots + 6.62181 \times 10^{18} b + 7.90428 \times 10^{18}, \\ &- 4.09728 \times 10^{18} u^{34} - 3.86755 \times 10^{18} u^{33} + \cdots + 6.62181 \times 10^{18} a - 2.70054 \times 10^{18},\ u^{35} + 3u^{34} + \cdots + 3u^2 \end{aligned}$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 35 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. $I_1^u = \langle -9.74 \times 10^{15} u^{34} + 8.22 \times 10^{17} u^{33} + \cdots + 6.62 \times 10^{18} b + 7.90 \times 10^{18},\ -4.10 \times 10^{18} u^{34} - 3.87 \times 10^{18} u^{33} + \cdots + 6.62 \times 10^{18} a - 2.70 \times 10^{18},\ u^{35} + 3u^{34} + \cdots + 3u^2 - 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.618755u^{34} + 0.584062u^{33} + \cdots - 9.67919u + 0.407825 \\ 0.00147104u^{34} - 0.124167u^{33} + \cdots + 0.203436u - 1.19367 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.09583u^{34} + 3.07364u^{33} + \cdots - 2.42964u - 5.58169 \\ -1.19271u^{34} - 2.87858u^{33} + \cdots + 1.54761u + 0.464135 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.620226u^{34} + 0.459895u^{33} + \cdots - 9.47575u - 0.785850 \\ 0.00147104u^{34} - 0.124167u^{33} + \cdots + 0.203436u - 1.19367 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.14790u^{34} + 6.59302u^{33} + \cdots - 8.38643u - 4.87814 \\ -0.134603u^{34} - 0.623769u^{33} + \cdots + 1.93231u - 0.272284 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.561562u^{34} + 0.370987u^{33} + \cdots - 9.79383u + 0.358105 \\ 0.0974274u^{34} + 0.171295u^{33} + \cdots + 0.0892870u - 1.18951 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{28372200930047336304}{6621809224193386385} u^{34} + \frac{75749700395542932768}{6621809224193386385} u^{33} + \cdots - \frac{95288194958111912596}{6621809224193386385} u - \frac{24995006422002411154}{6621809224193386385}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{10}	$u^{35} + 3u^{34} + \cdots + 3u^2 - 1$
c_2, c_6	$u^{35} - u^{34} + \cdots - 3u^2 + 1$
c_3	$u^{35} + 17u^{34} + \cdots + 214u + 23$
c_5	$u^{35} - 13u^{34} + \cdots + 12u - 7$
c_7, c_9	$u^{35} - u^{34} + \cdots - 2u + 1$
c_8	$u^{35} - 3u^{34} + \cdots + 4u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{10}	$y^{35} - 37y^{34} + \cdots + 6y - 1$
c_2, c_6	$y^{35} - 21y^{34} + \cdots + 6y - 1$
c_3	$y^{35} - 233y^{34} + \cdots + 5914y - 529$
c_5	$y^{35} - 237y^{34} + \cdots + 942y - 49$
c_7, c_9	$y^{35} - 25y^{34} + \cdots - 70y - 1$
c_8	$y^{35} + 3y^{34} + \cdots + 34y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.638742 + 0.763228I$ $a = -0.32878 - 1.37864I$ $b = 1.265670 + 0.500696I$	$-0.17363 - 9.53352I$	$-2.89594 + 8.02980I$
$u = 0.638742 - 0.763228I$ $a = -0.32878 + 1.37864I$ $b = 1.265670 - 0.500696I$	$-0.17363 + 9.53352I$	$-2.89594 - 8.02980I$
$u = 0.421188 + 0.899484I$ $a = -0.792986 - 0.007441I$ $b = 1.102020 - 0.318172I$	$0.51201 + 4.13357I$	$-2.56649 - 6.25203I$
$u = 0.421188 - 0.899484I$ $a = -0.792986 + 0.007441I$ $b = 1.102020 + 0.318172I$	$0.51201 - 4.13357I$	$-2.56649 + 6.25203I$
$u = -0.708907 + 0.871150I$ $a = -0.370730 + 0.784435I$ $b = 1.164500 - 0.178894I$	$-3.73588 + 3.17966I$	$-9.01884 - 7.80623I$
$u = -0.708907 - 0.871150I$ $a = -0.370730 - 0.784435I$ $b = 1.164500 + 0.178894I$	$-3.73588 - 3.17966I$	$-9.01884 + 7.80623I$
$u = 0.555117 + 0.428217I$ $a = 1.29244 - 0.80829I$ $b = 0.267299 + 0.532419I$	$2.98343 + 0.70642I$	$1.79862 + 1.96555I$
$u = 0.555117 - 0.428217I$ $a = 1.29244 + 0.80829I$ $b = 0.267299 - 0.532419I$	$2.98343 - 0.70642I$	$1.79862 - 1.96555I$
$u = 0.420666 + 0.556962I$ $a = -0.213994 + 1.367610I$ $b = 0.122551 - 0.993553I$	$3.42076 - 4.23935I$	$1.57284 + 6.50170I$
$u = 0.420666 - 0.556962I$ $a = -0.213994 - 1.367610I$ $b = 0.122551 + 0.993553I$	$3.42076 + 4.23935I$	$1.57284 - 6.50170I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.369300+0.067601I$ $a=\ \ 0.631419-0.279359I$ $b=\ \ 0.030418+0.167299I$	$-3.14805+0.11237I$	$-2.00000+0.I$
$u=-1.369300-0.067601I$ $a=\ \ 0.631419+0.279359I$ $b=\ \ 0.030418-0.167299I$	$-3.14805-0.11237I$	$-2.00000+0.I$
$u=\ \ 1.42805$ $a=-11.1085$ $b=-1.01279$	-4.96247	155.290
$u=-0.505143+0.260157I$ $a=\ \ 0.63134-1.66041I$ $b=-1.106350+0.599174I$	$-1.17815+2.75086I$	$-5.83679-7.59594I$
$u=-0.505143-0.260157I$ $a=\ \ 0.63134+1.66041I$ $b=-1.106350-0.599174I$	$-1.17815-2.75086I$	$-5.83679+7.59594I$
$u=\ \ 1.46072+0.11973I$ $a=-0.027998+0.767434I$ $b=-0.361779-0.871354I$	$-5.91469-2.99202I$	0
$u=\ \ 1.46072-0.11973I$ $a=-0.027998-0.767434I$ $b=-0.361779+0.871354I$	$-5.91469+2.99202I$	0
$u=-0.291602+0.421032I$ $a=\ \ 0.608613-0.956903I$ $b=-0.142845+0.366228I$	$-0.134869+1.085580I$	$-2.08723-6.10429I$
$u=-0.291602-0.421032I$ $a=\ \ 0.608613+0.956903I$ $b=-0.142845-0.366228I$	$-0.134869-1.085580I$	$-2.08723+6.10429I$
$u=-1.48666+0.16089I$ $a=-0.270075-0.598911I$ $b=-0.023905+1.336550I$	$-2.83088+6.77803I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.48666-0.16089I$ $a=-0.270075+0.598911I$ $b=-0.023905-1.336550I$	$-2.83088-6.77803I$	0
$u=-1.50842+0.01996I$ $a=-0.634805-0.360863I$ $b=-1.60295+0.26970I$	$-8.87322+0.26521I$	0
$u=-1.50842-0.01996I$ $a=-0.634805+0.360863I$ $b=-1.60295-0.26970I$	$-8.87322-0.26521I$	0
$u=1.51371+0.06175I$ $a=-0.323814+0.778359I$ $b=-1.42288-0.85959I$	$-7.88737-3.84000I$	0
$u=1.51371-0.06175I$ $a=-0.323814-0.778359I$ $b=-1.42288+0.85959I$	$-7.88737+3.84000I$	0
$u=0.458527+0.023050I$ $a=-0.364039+0.257321I$ $b=-1.252630-0.041449I$	$-2.28660-0.00327I$	$-6.71199-0.85350I$
$u=0.458527-0.023050I$ $a=-0.364039-0.257321I$ $b=-1.252630+0.041449I$	$-2.28660+0.00327I$	$-6.71199+0.85350I$
$u=-1.57609+0.25528I$ $a=0.520584+1.107560I$ $b=1.42500-0.57684I$	$-7.4557+13.3116I$	0
$u=-1.57609-0.25528I$ $a=0.520584-1.107560I$ $b=1.42500+0.57684I$	$-7.4557-13.3116I$	0
$u=1.59602+0.26769I$ $a=0.394220-0.908500I$ $b=1.38166+0.35942I$	$-11.27950-7.30532I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.59602 - 0.26769I$ $a = 0.394220 + 0.908500I$ $b = 1.38166 - 0.35942I$	$-11.27950 + 7.30532I$	0
$u = -0.151482 + 0.347444I$ $a = 5.01455 - 1.87194I$ $b = -0.984898 - 0.180613I$	$-0.118043 - 0.668153I$	$2.12828 - 10.66433I$
$u = -0.151482 - 0.347444I$ $a = 5.01455 + 1.87194I$ $b = -0.984898 + 0.180613I$	$-0.118043 + 0.668153I$	$2.12828 + 10.66433I$
$u = -1.68110 + 0.33608I$ $a = 0.288307 + 0.479751I$ $b = 1.145510 - 0.065819I$	$-6.16860 + 1.10468I$	0
$u = -1.68110 - 0.33608I$ $a = 0.288307 - 0.479751I$ $b = 1.145510 + 0.065819I$	$-6.16860 - 1.10468I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{10}	$u^{35} + 3u^{34} + \cdots + 3u^2 - 1$
c_2, c_6	$u^{35} - u^{34} + \cdots - 3u^2 + 1$
c_3	$u^{35} + 17u^{34} + \cdots + 214u + 23$
c_5	$u^{35} - 13u^{34} + \cdots + 12u - 7$
c_7, c_9	$u^{35} - u^{34} + \cdots - 2u + 1$
c_8	$u^{35} - 3u^{34} + \cdots + 4u - 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{10}	$y^{35} - 37y^{34} + \cdots + 6y - 1$
c_2, c_6	$y^{35} - 21y^{34} + \cdots + 6y - 1$
c_3	$y^{35} - 233y^{34} + \cdots + 5914y - 529$
c_5	$y^{35} - 237y^{34} + \cdots + 942y - 49$
c_7, c_9	$y^{35} - 25y^{34} + \cdots - 70y - 1$
c_8	$y^{35} + 3y^{34} + \cdots + 34y - 1$