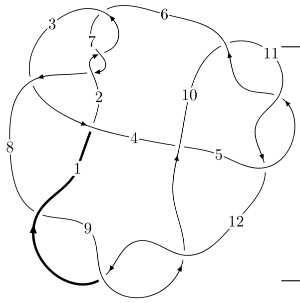
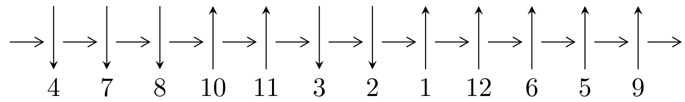
$12a_{1034}$ ($K12a_{1034}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{60} + u^{59} + \cdots - u^2 + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 60 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. $I_1^u = \langle u^{60} + u^{59} + \cdots - u^2 + 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^4 - u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^8 + 3u^6 + u^4 - 2u^2 + 1 \\ -u^8 - 4u^6 - 4u^4 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{20} + 9u^{18} + \cdots - 3u^2 + 1 \\ u^{22} + 10u^{20} + \cdots - 10u^4 + u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{12} - 5u^{10} - 7u^8 + 2u^4 - 3u^2 + 1 \\ u^{12} + 6u^{10} + 12u^8 + 8u^6 + u^4 + 2u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{31} - 14u^{29} + \cdots + 20u^5 - 8u^3 \\ u^{31} + 15u^{29} + \cdots - 8u^5 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{54} + 25u^{52} + \cdots - 2u^2 + 1 \\ u^{56} + 26u^{54} + \cdots + 2u^4 + 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{58} - 4u^{57} + \cdots + 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{60} - 15u^{59} + \cdots - 16u + 1$
c_2, c_6, c_7	$u^{60} + u^{59} + \cdots + 2u + 1$
c_3	$u^{60} - u^{59} + \cdots + 12u + 5$
c_4	$u^{60} - u^{59} + \cdots - 976u + 457$
c_5, c_{10}, c_{11}	$u^{60} + u^{59} + \cdots - u^2 + 1$
c_8, c_9, c_{12}	$u^{60} + 7u^{59} + \cdots + 176u + 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{60} + y^{59} + \cdots + 126y + 1$
c_2, c_6, c_7	$y^{60} + 53y^{59} + \cdots - 2y + 1$
c_3	$y^{60} - 7y^{59} + \cdots + 266y + 25$
c_4	$y^{60} + 29y^{59} + \cdots + 6707658y + 208849$
c_5, c_{10}, c_{11}	$y^{60} + 57y^{59} + \cdots - 2y + 1$
c_8, c_9, c_{12}	$y^{60} + 65y^{59} + \cdots + 8430y + 289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.073972 + 1.163980I$	$3.44486 - 4.07290I$	0
$u = -0.073972 - 1.163980I$	$3.44486 + 4.07290I$	0
$u = -0.687972 + 0.447740I$	$-1.97103 - 10.12300I$	$1.79388 + 7.77303I$
$u = -0.687972 - 0.447740I$	$-1.97103 + 10.12300I$	$1.79388 - 7.77303I$
$u = \quad 0.680583 + 0.456074I$	$-7.13842 + 6.32141I$	$-2.86224 - 6.81848I$
$u = \quad 0.680583 - 0.456074I$	$-7.13842 - 6.32141I$	$-2.86224 + 6.81848I$
$u = -0.634060 + 0.514914I$	$-2.22403 + 5.72401I$	$1.08593 - 1.85120I$
$u = -0.634060 - 0.514914I$	$-2.22403 - 5.72401I$	$1.08593 + 1.85120I$
$u = \quad 0.642018 + 0.503673I$	$-7.31878 - 1.92743I$	$-3.47550 + 0.73718I$
$u = \quad 0.642018 - 0.503673I$	$-7.31878 + 1.92743I$	$-3.47550 - 0.73718I$
$u = -0.664857 + 0.466839I$	$-5.12792 - 2.35466I$	$-0.20423 + 2.11201I$
$u = -0.664857 - 0.466839I$	$-5.12792 + 2.35466I$	$-0.20423 - 2.11201I$
$u = -0.651503 + 0.484423I$	$-5.19301 - 2.00819I$	$-0.45901 + 4.03609I$
$u = -0.651503 - 0.484423I$	$-5.19301 + 2.00819I$	$-0.45901 - 4.03609I$
$u = \quad 0.042814 + 1.220540I$	$-1.97107 + 1.50217I$	0
$u = \quad 0.042814 - 1.220540I$	$-1.97107 - 1.50217I$	0
$u = \quad 0.624478 + 0.433571I$	$1.64938 + 2.01589I$	$4.08259 - 3.48102I$
$u = \quad 0.624478 - 0.433571I$	$1.64938 - 2.01589I$	$4.08259 + 3.48102I$
$u = -0.181617 + 1.297260I$	$2.13974 - 1.34166I$	0
$u = -0.181617 - 1.297260I$	$2.13974 + 1.34166I$	0
$u = \quad 0.614989 + 0.200876I$	$5.34028 + 6.50684I$	$7.37974 - 8.13021I$
$u = \quad 0.614989 - 0.200876I$	$5.34028 - 6.50684I$	$7.37974 + 8.13021I$
$u = \quad 0.163827 + 1.347560I$	$-3.62256 + 2.89228I$	0
$u = \quad 0.163827 - 1.347560I$	$-3.62256 - 2.89228I$	0
$u = \quad 0.219969 + 1.352410I$	$0.44892 + 9.53691I$	0
$u = \quad 0.219969 - 1.352410I$	$0.44892 - 9.53691I$	0
$u = -0.202204 + 1.360380I$	$-4.85892 - 6.22848I$	0
$u = -0.202204 - 1.360380I$	$-4.85892 + 6.22848I$	0
$u = -0.574314 + 0.211859I$	$0.10203 - 3.40195I$	$2.36486 + 8.98890I$
$u = -0.574314 - 0.211859I$	$0.10203 + 3.40195I$	$2.36486 - 8.98890I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.593296 + 0.091146I$	$6.41878 + 1.46042I$	$10.68628 + 0.60168I$
$u = -0.593296 - 0.091146I$	$6.41878 - 1.46042I$	$10.68628 - 0.60168I$
$u = -0.094939 + 1.403170I$	$-6.72408 - 0.55116I$	0
$u = -0.094939 - 1.403170I$	$-6.72408 + 0.55116I$	0
$u = 0.141219 + 1.403700I$	$-3.71284 + 3.63692I$	0
$u = 0.141219 - 1.403700I$	$-3.71284 - 3.63692I$	0
$u = 0.06449 + 1.41451I$	$-2.22010 - 2.72204I$	0
$u = 0.06449 - 1.41451I$	$-2.22010 + 2.72204I$	0
$u = 0.449146 + 0.370470I$	$1.87583 + 1.52379I$	$1.42533 - 4.53633I$
$u = 0.449146 - 0.370470I$	$1.87583 - 1.52379I$	$1.42533 + 4.53633I$
$u = 0.175087 + 0.537271I$	$3.72771 - 3.58989I$	$1.96909 + 2.44140I$
$u = 0.175087 - 0.537271I$	$3.72771 + 3.58989I$	$1.96909 - 2.44140I$
$u = 0.504340 + 0.126906I$	$1.045820 + 0.488578I$	$7.62233 - 1.40615I$
$u = 0.504340 - 0.126906I$	$1.045820 - 0.488578I$	$7.62233 + 1.40615I$
$u = 0.22963 + 1.46850I$	$-4.48715 + 5.15340I$	0
$u = 0.22963 - 1.46850I$	$-4.48715 - 5.15340I$	0
$u = -0.24885 + 1.48213I$	$-8.2124 - 13.5434I$	0
$u = -0.24885 - 1.48213I$	$-8.2124 + 13.5434I$	0
$u = -0.23681 + 1.48479I$	$-11.44400 - 5.64534I$	0
$u = -0.23681 - 1.48479I$	$-11.44400 + 5.64534I$	0
$u = 0.24451 + 1.48402I$	$-13.4161 + 9.6987I$	0
$u = 0.24451 - 1.48402I$	$-13.4161 - 9.6987I$	0
$u = -0.22774 + 1.48877I$	$-11.58670 - 5.21243I$	0
$u = -0.22774 - 1.48877I$	$-11.58670 + 5.21243I$	0
$u = 0.21994 + 1.49282I$	$-13.79450 + 1.20545I$	0
$u = 0.21994 - 1.49282I$	$-13.79450 - 1.20545I$	0
$u = -0.21419 + 1.49447I$	$-8.74495 + 2.64788I$	0
$u = -0.21419 - 1.49447I$	$-8.74495 - 2.64788I$	0
$u = -0.230735 + 0.410245I$	$-1.120870 + 0.745291I$	$-4.58971 - 1.41365I$
$u = -0.230735 - 0.410245I$	$-1.120870 - 0.745291I$	$-4.58971 + 1.41365I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{60} - 15u^{59} + \cdots - 16u + 1$
c_2, c_6, c_7	$u^{60} + u^{59} + \cdots + 2u + 1$
c_3	$u^{60} - u^{59} + \cdots + 12u + 5$
c_4	$u^{60} - u^{59} + \cdots - 976u + 457$
c_5, c_{10}, c_{11}	$u^{60} + u^{59} + \cdots - u^2 + 1$
c_8, c_9, c_{12}	$u^{60} + 7u^{59} + \cdots + 176u + 17$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{60} + y^{59} + \cdots + 126y + 1$
c_2, c_6, c_7	$y^{60} + 53y^{59} + \cdots - 2y + 1$
c_3	$y^{60} - 7y^{59} + \cdots + 266y + 25$
c_4	$y^{60} + 29y^{59} + \cdots + 6707658y + 208849$
c_5, c_{10}, c_{11}	$y^{60} + 57y^{59} + \cdots - 2y + 1$
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