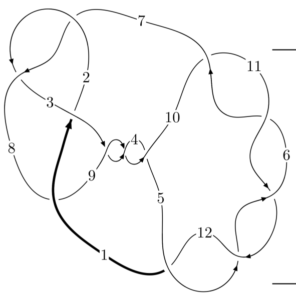
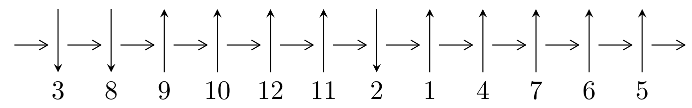
$12a_{0732}$ ($K12a_{0732}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{47} + u^{46} + \cdots + 2u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 47 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. $I_1^u = \langle u^{47} + u^{46} + \cdots + 2u + 1 \rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 + 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^6 - 3u^4 + 1 \\ u^6 + 4u^4 + 3u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{11} + 6u^9 + 10u^7 + 2u^5 - 3u^3 - 2u \\ -u^{11} - 7u^9 - 16u^7 - 13u^5 - 3u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{16} + 9u^{14} + 29u^{12} + 38u^{10} + 13u^8 - 10u^6 - 12u^4 - 2u^2 + 1 \\ -u^{16} - 10u^{14} - 38u^{12} - 68u^{10} - 58u^8 - 20u^6 + 4u^4 + 4u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{37} - 22u^{35} + \cdots + 10u^3 + u \\ u^{37} + 23u^{35} + \cdots - u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{19} + 12u^{17} + \cdots - 11u^3 - 2u \\ u^{21} + 13u^{19} + \cdots - 7u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{46} + 4u^{45} + \cdots - 4u + 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{47} + 21u^{46} + \cdots + 4u + 1$
c_2, c_7	$u^{47} + u^{46} + \cdots + 2u^2 - 1$
c_3, c_4, c_9	$u^{47} - u^{46} + \cdots + 19u^2 - 4$
c_5, c_6, c_{10} c_{11}, c_{12}	$u^{47} - u^{46} + \cdots + 2u - 1$
c_8	$u^{47} + 3u^{46} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{47} + 11y^{46} + \cdots - 24y - 1$
c_2, c_7	$y^{47} - 21y^{46} + \cdots + 4y - 1$
c_3, c_4, c_9	$y^{47} - 45y^{46} + \cdots + 152y - 16$
c_5, c_6, c_{10} c_{11}, c_{12}	$y^{47} + 59y^{46} + \cdots + 4y - 1$
c_8	$y^{47} - y^{46} + \cdots + 48y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.413784 + 0.877713I$	$2.77094 - 10.32890I$	$4.55615 + 8.72539I$
$u = -0.413784 - 0.877713I$	$2.77094 + 10.32890I$	$4.55615 - 8.72539I$
$u = 0.195276 + 0.942019I$	$-4.26421 + 6.13092I$	$-0.95567 - 8.26497I$
$u = 0.195276 - 0.942019I$	$-4.26421 - 6.13092I$	$-0.95567 + 8.26497I$
$u = 0.413997 + 0.861943I$	$4.64721 + 5.04866I$	$7.42319 - 4.27573I$
$u = 0.413997 - 0.861943I$	$4.64721 - 5.04866I$	$7.42319 + 4.27573I$
$u = 0.088069 + 0.951448I$	$-5.29996 - 0.71896I$	$-4.01239 + 0.13887I$
$u = 0.088069 - 0.951448I$	$-5.29996 + 0.71896I$	$-4.01239 - 0.13887I$
$u = -0.371801 + 0.847703I$	$-0.66504 - 3.24376I$	$1.24977 + 4.19607I$
$u = -0.371801 - 0.847703I$	$-0.66504 + 3.24376I$	$1.24977 - 4.19607I$
$u = 0.418667 + 0.819399I$	$4.90772 + 2.01411I$	$7.94310 - 3.89227I$
$u = 0.418667 - 0.819399I$	$4.90772 - 2.01411I$	$7.94310 + 3.89227I$
$u = -0.422632 + 0.799038I$	$3.24960 + 3.24336I$	$5.51628 - 0.96386I$
$u = -0.422632 - 0.799038I$	$3.24960 - 3.24336I$	$5.51628 + 0.96386I$
$u = -0.166444 + 0.877591I$	$-2.03526 - 1.97557I$	$2.70543 + 4.55475I$
$u = -0.166444 - 0.877591I$	$-2.03526 + 1.97557I$	$2.70543 - 4.55475I$
$u = -0.173002 + 0.658242I$	$-0.78945 - 1.82375I$	$5.03537 + 5.41712I$
$u = -0.173002 - 0.658242I$	$-0.78945 + 1.82375I$	$5.03537 - 5.41712I$
$u = -0.632705 + 0.037024I$	$5.54952 - 6.80116I$	$9.39680 + 5.30944I$
$u = -0.632705 - 0.037024I$	$5.54952 + 6.80116I$	$9.39680 - 5.30944I$
$u = 0.631119 + 0.020188I$	$7.32256 + 1.52528I$	$12.11554 - 0.46181I$
$u = 0.631119 - 0.020188I$	$7.32256 - 1.52528I$	$12.11554 + 0.46181I$
$u = -0.585855$	1.90017	6.44170
$u = 0.263626 + 0.379028I$	$-1.33756 - 1.71540I$	$3.14465 - 0.50606I$
$u = 0.263626 - 0.379028I$	$-1.33756 + 1.71540I$	$3.14465 + 0.50606I$
$u = 0.408286 + 0.210597I$	$-0.73079 + 4.11365I$	$6.43864 - 8.58454I$
$u = 0.408286 - 0.210597I$	$-0.73079 - 4.11365I$	$6.43864 + 8.58454I$
$u = -0.368463 + 0.084232I$	$0.852973 - 0.196059I$	$12.38641 + 2.18387I$
$u = -0.368463 - 0.084232I$	$0.852973 + 0.196059I$	$12.38641 - 2.18387I$
$u = -0.01412 + 1.64039I$	$-8.92297 - 2.26281I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.01412 - 1.64039I$	$-8.92297 + 2.26281I$	0
$u = -0.10060 + 1.64581I$	$-5.17503 + 1.32295I$	0
$u = -0.10060 - 1.64581I$	$-5.17503 - 1.32295I$	0
$u = \quad 0.10339 + 1.65410I$	$-3.64160 + 3.95604I$	0
$u = \quad 0.10339 - 1.65410I$	$-3.64160 - 3.95604I$	0
$u = -0.09363 + 1.67036I$	$-9.45217 - 4.99818I$	0
$u = -0.09363 - 1.67036I$	$-9.45217 + 4.99818I$	0
$u = \quad 0.10750 + 1.66999I$	$-4.14651 + 7.03674I$	0
$u = \quad 0.10750 - 1.66999I$	$-4.14651 - 7.03674I$	0
$u = -0.10893 + 1.67541I$	$-6.10861 - 12.33850I$	0
$u = -0.10893 - 1.67541I$	$-6.10861 + 12.33850I$	0
$u = -0.03693 + 1.68229I$	$-11.09350 - 2.72228I$	0
$u = -0.03693 - 1.68229I$	$-11.09350 + 2.72228I$	0
$u = \quad 0.04483 + 1.69525I$	$-13.5927 + 7.0408I$	0
$u = \quad 0.04483 - 1.69525I$	$-13.5927 - 7.0408I$	0
$u = \quad 0.02120 + 1.69620I$	$-14.6803 - 0.2975I$	0
$u = \quad 0.02120 - 1.69620I$	$-14.6803 + 0.2975I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{47} + 21u^{46} + \cdots + 4u + 1$
c_2, c_7	$u^{47} + u^{46} + \cdots + 2u^2 - 1$
c_3, c_4, c_9	$u^{47} - u^{46} + \cdots + 19u^2 - 4$
c_5, c_6, c_{10} c_{11}, c_{12}	$u^{47} - u^{46} + \cdots + 2u - 1$
c_8	$u^{47} + 3u^{46} + \cdots + 4u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{47} + 11y^{46} + \cdots - 24y - 1$
c_2, c_7	$y^{47} - 21y^{46} + \cdots + 4y - 1$
c_3, c_4, c_9	$y^{47} - 45y^{46} + \cdots + 152y - 16$
c_5, c_6, c_{10} c_{11}, c_{12}	$y^{47} + 59y^{46} + \cdots + 4y - 1$
c_8	$y^{47} - y^{46} + \cdots + 48y - 1$