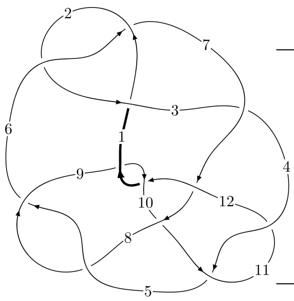
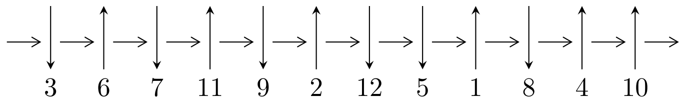
$12a_{0262}$ $(K12a_{0262})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 8u^{32} - 16u^{31} + \cdots + b + 9,\ u^{32} - 3u^{31} + \cdots + a + 3,\ u^{33} - 2u^{32} + \cdots + 2u - 1\rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 33 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.

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$$\boldsymbol{I_1^u = \langle 8u^{32}-16u^{31}+\cdots+b+9,\ u^{32}-3u^{31}+\cdots+a+3,\ u^{33}-2u^{32}+\cdots+2u-1\rangle}$$

(i) Arc colorings

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

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

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

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

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

$$a_9 = \begin{pmatrix} -u^{32} + 3u^{31} + \cdots + 10u - 3 \\ -8u^{32} + 16u^{31} + \cdots + 27u - 9 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 4u^{31} - 8u^{30} + \cdots + 19u - 8 \\ -4u^{32} + 6u^{31} + \cdots + 14u - 4 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3u^{32} - 12u^{31} + \cdots - 24u + 9 \\ 2u^{32} - 3u^{31} + \cdots - 15u + 4 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 12u^{32} - 35u^{31} + \cdots - 48u + 17 \\ -6u^{32} + 11u^{31} + \cdots + 10u - 3 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 12u^{32} - 15u^{31} + \cdots + 3u - 14 \\ 3u^{32} - 11u^{31} + \cdots - 22u + 12 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^6 + 2u^4 + u^2 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 14u^{32} - 23u^{31} + \cdots - 9u - 8 \\ 2u^{32} - 9u^{31} + \cdots - 20u + 11 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 20u^{32} - 13u^{31} + 159u^{30} - 58u^{29} + 575u^{28} - 25u^{27} + 1135u^{26} + 552u^{25} + 1074u^{24} + 2154u^{23} - 267u^{22} + 4203u^{21} - 1896u^{20} + 4776u^{19} - 1567u^{18} + 2737u^{17} + 1151u^{16} - 350u^{15} + 3593u^{14} - 1677u^{13} + 3251u^{12} - 624u^{11} + 989u^{10} + 1026u^9 - 732u^8 + 1548u^7 - 975u^6 + 992u^5 - 556u^4 + 318u^3 - 196u^2 + 35u - 42$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{33} - 18u^{32} + \cdots - 12u + 1$
c_2	$u^{33} - 2u^{32} + \cdots + 2u - 1$
c_3	$u^{33} + 2u^{32} + \cdots - 2u - 1$
c_4	$u^{33} + u^{32} + \cdots - u - 1$
c_5	$u^{33} + 3u^{32} + \cdots + 3u - 1$
c_6	$u^{33} + 2u^{32} + \cdots + 2u + 1$
c_7	$u^{33} + 2u^{32} + \cdots + 2u + 1$
c_8	$u^{33} - 3u^{32} + \cdots + 3u + 1$
c_9	$u^{33} + 5u^{32} + \cdots + 5u + 1$
c_{10}	$u^{33} + 6u^{32} + \cdots + 12u + 1$
c_{11}	$u^{33} - u^{32} + \cdots - u + 1$
c_{12}	$u^{33} - 5u^{32} + \cdots + 5u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{33} - 2y^{32} + \cdots + 8y - 1$
c_2, c_6	$y^{33} + 18y^{32} + \cdots - 12y - 1$
c_3	$y^{33} - 22y^{32} + \cdots - 26y - 1$
c_4, c_{11}	$y^{33} + 23y^{32} + \cdots + 13y - 1$
c_5, c_8	$y^{33} - 37y^{32} + \cdots + 13y - 1$
c_7	$y^{33} - 10y^{32} + \cdots + 34y - 1$
c_9, c_{12}	$y^{33} + 21y^{32} + \cdots - 13y - 1$
c_{10}	$y^{33} - 10y^{32} + \cdots + 30y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.415757+0.879714I$ $a=-0.310927+0.116953I$ $b=1.245100+0.447794I$	$-0.28049-3.92650I$	$-4.28046+8.45501I$
$u=-0.415757-0.879714I$ $a=-0.310927-0.116953I$ $b=1.245100-0.447794I$	$-0.28049+3.92650I$	$-4.28046-8.45501I$
$u=0.889089+0.341493I$ $a=-1.334450+0.044982I$ $b=-0.835473-0.925109I$	$-6.37279-2.89979I$	$-7.35601+2.74561I$
$u=0.889089-0.341493I$ $a=-1.334450-0.044982I$ $b=-0.835473+0.925109I$	$-6.37279+2.89979I$	$-7.35601-2.74561I$
$u=-0.925009+0.139920I$ $a=1.47738+0.02503I$ $b=0.640026-0.713052I$	$-7.59997+1.16632I$	$-5.62381+0.53430I$
$u=-0.925009-0.139920I$ $a=1.47738-0.02503I$ $b=0.640026+0.713052I$	$-7.59997-1.16632I$	$-5.62381-0.53430I$
$u=0.362523+1.024310I$ $a=0.746326-0.488114I$ $b=2.02961+1.06595I$	$-6.88884-1.47204I$	$-7.24631-0.05525I$
$u=0.362523-1.024310I$ $a=0.746326+0.488114I$ $b=2.02961-1.06595I$	$-6.88884+1.47204I$	$-7.24631+0.05525I$
$u=-0.450656+0.786575I$ $a=0.026429+0.336633I$ $b=-0.047044+1.053090I$	$0.012283+0.311664I$	$3.64526-0.95783I$
$u=-0.450656-0.786575I$ $a=0.026429-0.336633I$ $b=-0.047044-1.053090I$	$0.012283-0.311664I$	$3.64526+0.95783I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.699677 + 0.526180I$ $a = -0.998558 + 0.221434I$ $b = -0.310310 + 0.195387I$	$-3.61554 - 3.10551I$	$-5.05153 + 3.45408I$
$u = 0.699677 - 0.526180I$ $a = -0.998558 - 0.221434I$ $b = -0.310310 - 0.195387I$	$-3.61554 + 3.10551I$	$-5.05153 - 3.45408I$
$u = -0.461345 + 1.031380I$ $a = -0.309219 - 0.530900I$ $b = -0.588642 + 0.498459I$	$-1.18585 - 3.17980I$	$-8.28309 + 4.12212I$
$u = -0.461345 - 1.031380I$ $a = -0.309219 + 0.530900I$ $b = -0.588642 - 0.498459I$	$-1.18585 + 3.17980I$	$-8.28309 - 4.12212I$
$u = 0.319392 + 1.139410I$ $a = 0.801591 - 1.128270I$ $b = 0.645311 - 0.002396I$	$-10.97950 + 0.06682I$	$-10.54672 - 0.14143I$
$u = 0.319392 - 1.139410I$ $a = 0.801591 + 1.128270I$ $b = 0.645311 + 0.002396I$	$-10.97950 - 0.06682I$	$-10.54672 + 0.14143I$
$u = 0.567598 + 1.073240I$ $a = -0.024768 - 0.681279I$ $b = 0.029381 - 0.576170I$	$-5.33194 + 8.00776I$	$-7.58671 - 6.67740I$
$u = 0.567598 - 1.073240I$ $a = -0.024768 + 0.681279I$ $b = 0.029381 + 0.576170I$	$-5.33194 - 8.00776I$	$-7.58671 + 6.67740I$
$u = 0.213741 + 0.747529I$ $a = 0.44378 + 1.36082I$ $b = -2.65599 - 0.82648I$	$-5.67246 + 4.09164I$	$-1.47347 - 8.31889I$
$u = 0.213741 - 0.747529I$ $a = 0.44378 - 1.36082I$ $b = -2.65599 + 0.82648I$	$-5.67246 - 4.09164I$	$-1.47347 + 8.31889I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.044555 + 0.763029I$ $a = 0.26951 + 2.29758I$ $b = -1.035990 + 0.506927I$	$-8.91211 + 1.56145I$	$-7.74657 - 2.97681I$
$u = 0.044555 - 0.763029I$ $a = 0.26951 - 2.29758I$ $b = -1.035990 - 0.506927I$	$-8.91211 - 1.56145I$	$-7.74657 + 2.97681I$
$u = 0.454510 + 1.153340I$ $a = 0.284320 - 0.958356I$ $b = 0.99905 - 1.93065I$	$-3.43511 + 4.06164I$	$-1.84707 - 3.29080I$
$u = 0.454510 - 1.153340I$ $a = 0.284320 + 0.958356I$ $b = 0.99905 + 1.93065I$	$-3.43511 - 4.06164I$	$-1.84707 + 3.29080I$
$u = -0.369754 + 1.204530I$ $a = -0.469785 - 1.239170I$ $b = -0.478866 - 1.069080I$	$-11.94570 - 2.89125I$	$-9.51390 + 3.40460I$
$u = -0.369754 - 1.204530I$ $a = -0.469785 + 1.239170I$ $b = -0.478866 + 1.069080I$	$-11.94570 + 2.89125I$	$-9.51390 - 3.40460I$
$u = -0.491464 + 1.224780I$ $a = -0.115049 - 1.120650I$ $b = -1.80600 - 1.71244I$	$-11.05150 - 6.20149I$	$-8.51895 + 3.78482I$
$u = -0.491464 - 1.224780I$ $a = -0.115049 + 1.120650I$ $b = -1.80600 + 1.71244I$	$-11.05150 + 6.20149I$	$-8.51895 - 3.78482I$
$u = 0.570176 + 1.190950I$ $a = -0.053100 - 0.985645I$ $b = 1.63829 - 1.28317I$	$-9.06173 + 8.29388I$	$-8.92407 - 7.11050I$
$u = 0.570176 - 1.190950I$ $a = -0.053100 + 0.985645I$ $b = 1.63829 + 1.28317I$	$-9.06173 - 8.29388I$	$-8.92407 + 7.11050I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.316420 + 0.565399I$ $a = 0.460695 + 1.226470I$ $b = 1.380710 + 0.272067I$	$0.381875 - 0.429677I$	$-0.97944 - 3.23646I$
$u = -0.316420 - 0.565399I$ $a = 0.460695 - 1.226470I$ $b = 1.380710 - 0.272067I$	$0.381875 + 0.429677I$	$-0.97944 + 3.23646I$
$u = 0.618289$ $a = -1.78836$ $b = 0.301684$	-0.353891	2.66570

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{33} - 18u^{32} + \cdots - 12u + 1$
c_2	$u^{33} - 2u^{32} + \cdots + 2u - 1$
c_3	$u^{33} + 2u^{32} + \cdots - 2u - 1$
c_4	$u^{33} + u^{32} + \cdots - u - 1$
c_5	$u^{33} + 3u^{32} + \cdots + 3u - 1$
c_6	$u^{33} + 2u^{32} + \cdots + 2u + 1$
c_7	$u^{33} + 2u^{32} + \cdots + 2u + 1$
c_8	$u^{33} - 3u^{32} + \cdots + 3u + 1$
c_9	$u^{33} + 5u^{32} + \cdots + 5u + 1$
c_{10}	$u^{33} + 6u^{32} + \cdots + 12u + 1$
c_{11}	$u^{33} - u^{32} + \cdots - u + 1$
c_{12}	$u^{33} - 5u^{32} + \cdots + 5u - 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{33} - 2y^{32} + \cdots + 8y - 1$
c_2, c_6	$y^{33} + 18y^{32} + \cdots - 12y - 1$
c_3	$y^{33} - 22y^{32} + \cdots - 26y - 1$
c_4, c_{11}	$y^{33} + 23y^{32} + \cdots + 13y - 1$
c_5, c_8	$y^{33} - 37y^{32} + \cdots + 13y - 1$
c_7	$y^{33} - 10y^{32} + \cdots + 34y - 1$
c_9, c_{12}	$y^{33} + 21y^{32} + \cdots - 13y - 1$
c_{10}	$y^{33} - 10y^{32} + \cdots + 30y - 1$