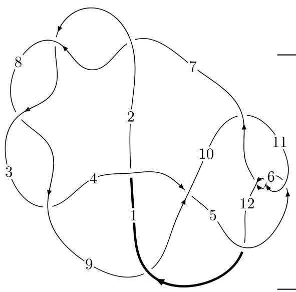
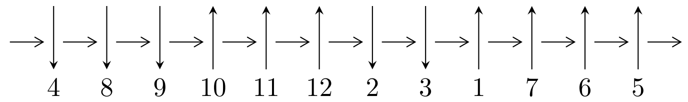
$12a_{1130}$ ($K12a_{1130}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{62} - u^{61} + \cdots + u + 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 62 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. $I_1^u = \langle u^{62} - u^{61} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^4 - 3u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^9 - 6u^7 + 11u^5 - 6u^3 + u \\ u^9 - 5u^7 + 7u^5 - 2u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{18} + 11u^{16} - 48u^{14} + 105u^{12} - 121u^{10} + 75u^8 - 30u^6 + 8u^4 - u^2 + 1 \\ -u^{18} + 10u^{16} - 39u^{14} + 74u^{12} - 71u^{10} + 38u^8 - 18u^6 + 4u^4 - u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^3 + 2u \\ u^5 - 3u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{17} - 10u^{15} + 39u^{13} - 74u^{11} + 71u^9 - 38u^7 + 18u^5 - 4u^3 + u \\ -u^{19} + 11u^{17} - 48u^{15} + 105u^{13} - 121u^{11} + 75u^9 - 30u^7 + 8u^5 - u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^{32} - 19u^{30} + \cdots - 2u^2 + 1 \\ u^{32} - 18u^{30} + \cdots + 12u^8 - 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{54} + 31u^{52} + \cdots - 2u^2 + 1 \\ u^{56} - 32u^{54} + \cdots + 6u^4 - 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{59} + 136u^{57} + \cdots - 4u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{62} - 17u^{61} + \cdots + 1847u - 113$
c_2, c_3, c_7 c_8	$u^{62} + u^{61} + \cdots - u + 1$
c_4	$u^{62} - u^{61} + \cdots + 15u + 1$
c_5, c_6, c_{11}	$u^{62} + u^{61} + \cdots - u + 1$
c_9	$u^{62} - 5u^{61} + \cdots + 640u + 304$
c_{10}, c_{12}	$u^{62} - 3u^{61} + \cdots + 55u - 9$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{62} - 11y^{61} + \cdots - 256449y + 12769$
c_2, c_3, c_7 c_8	$y^{62} - 71y^{61} + \cdots - y + 1$
c_4	$y^{62} + y^{61} + \cdots + 127y + 1$
c_5, c_6, c_{11}	$y^{62} - 51y^{61} + \cdots - y + 1$
c_9	$y^{62} + 25y^{61} + \cdots - 2665888y + 92416$
c_{10}, c_{12}	$y^{62} + 41y^{61} + \cdots - 2233y + 81$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.708768 + 0.494433I$	$-0.01088 + 11.34630I$	$1.00889 - 9.72117I$
$u = -0.708768 - 0.494433I$	$-0.01088 - 11.34630I$	$1.00889 + 9.72117I$
$u = 0.712691 + 0.482290I$	$-4.59207 - 7.20372I$	$-3.76784 + 7.81893I$
$u = 0.712691 - 0.482290I$	$-4.59207 + 7.20372I$	$-3.76784 - 7.81893I$
$u = 0.821977 + 0.248060I$	$-1.60870 + 5.02300I$	$-2.11818 - 2.33854I$
$u = 0.821977 - 0.248060I$	$-1.60870 - 5.02300I$	$-2.11818 + 2.33854I$
$u = -0.717017 + 0.462468I$	$-1.49252 + 3.04670I$	$-0.95105 - 4.03685I$
$u = -0.717017 - 0.462468I$	$-1.49252 - 3.04670I$	$-0.95105 + 4.03685I$
$u = -0.804271 + 0.274945I$	$-5.95144 - 0.93191I$	$-6.82947 - 0.41510I$
$u = -0.804271 - 0.274945I$	$-5.95144 + 0.93191I$	$-6.82947 + 0.41510I$
$u = 0.786850 + 0.308644I$	$-2.51765 - 3.16231I$	$-3.19226 + 4.63064I$
$u = 0.786850 - 0.308644I$	$-2.51765 + 3.16231I$	$-3.19226 - 4.63064I$
$u = 0.645614 + 0.481542I$	$5.40192 - 4.93284I$	$5.98347 + 6.95967I$
$u = 0.645614 - 0.481542I$	$5.40192 + 4.93284I$	$5.98347 - 6.95967I$
$u = -0.661871 + 0.431665I$	$-0.37286 + 3.82050I$	$0.80971 - 8.83279I$
$u = -0.661871 - 0.431665I$	$-0.37286 - 3.82050I$	$0.80971 + 8.83279I$
$u = 0.620723 + 0.337292I$	$-1.08571 - 1.06603I$	$-2.60164 + 1.01884I$
$u = 0.620723 - 0.337292I$	$-1.08571 + 1.06603I$	$-2.60164 - 1.01884I$
$u = -0.698913$	2.99735	1.03130
$u = -0.524035 + 0.459452I$	$3.21307 - 1.54671I$	$5.20781 - 1.38178I$
$u = -0.524035 - 0.459452I$	$3.21307 + 1.54671I$	$5.20781 + 1.38178I$
$u = -0.383395 + 0.494306I$	$3.62071 + 4.90483I$	$6.55837 - 6.65558I$
$u = -0.383395 - 0.494306I$	$3.62071 - 4.90483I$	$6.55837 + 6.65558I$
$u = -0.164450 + 0.582453I$	$1.57732 - 7.67033I$	$4.62669 + 4.82288I$
$u = -0.164450 - 0.582453I$	$1.57732 + 7.67033I$	$4.62669 - 4.82288I$
$u = 0.412131 + 0.432363I$	$-0.75273 - 1.50608I$	$0.71484 + 5.28376I$
$u = 0.412131 - 0.432363I$	$-0.75273 + 1.50608I$	$0.71484 - 5.28376I$
$u = 0.147128 + 0.569414I$	$-2.94806 + 3.60850I$	$-0.16305 - 2.91417I$
$u = 0.147128 - 0.569414I$	$-2.94806 - 3.60850I$	$-0.16305 + 2.91417I$
$u = 0.250782 + 0.527668I$	$6.54621 + 1.43098I$	$9.71321 - 0.47730I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.250782 - 0.527668I$	$6.54621 - 1.43098I$	$9.71321 + 0.47730I$
$u = -0.116312 + 0.549646I$	$0.240300 + 0.413797I$	$2.99515 - 0.89523I$
$u = -0.116312 - 0.549646I$	$0.240300 - 0.413797I$	$2.99515 + 0.89523I$
$u = -1.45204$	1.51065	0
$u = 1.47356 + 0.06742I$	$-2.33707 - 6.71684I$	0
$u = 1.47356 - 0.06742I$	$-2.33707 + 6.71684I$	0
$u = -1.49480 + 0.05903I$	$-6.95748 + 3.05756I$	0
$u = -1.49480 - 0.05903I$	$-6.95748 - 3.05756I$	0
$u = 1.50087$	-4.52108	0
$u = -0.202355 + 0.437640I$	$0.938163 - 0.711468I$	$6.55301 + 2.55999I$
$u = -0.202355 - 0.437640I$	$0.938163 + 0.711468I$	$6.55301 - 2.55999I$
$u = 1.54113$	-4.36757	0
$u = 1.55617 + 0.10084I$	$-3.77147 - 0.32838I$	0
$u = 1.55617 - 0.10084I$	$-3.77147 + 0.32838I$	0
$u = -1.58656 + 0.13617I$	$-2.15018 + 7.19293I$	0
$u = -1.58656 - 0.13617I$	$-2.15018 - 7.19293I$	0
$u = -1.58930 + 0.10190I$	$-8.66644 + 2.71730I$	0
$u = -1.58930 - 0.10190I$	$-8.66644 - 2.71730I$	0
$u = 1.59484 + 0.12216I$	$-8.05254 - 5.85903I$	0
$u = 1.59484 - 0.12216I$	$-8.05254 + 5.85903I$	0
$u = 1.60793 + 0.14425I$	$-7.8739 - 13.7323I$	0
$u = 1.60793 - 0.14425I$	$-7.8739 + 13.7323I$	0
$u = -1.60930 + 0.14013I$	$-12.4821 + 9.5303I$	0
$u = -1.60930 - 0.14013I$	$-12.4821 - 9.5303I$	0
$u = 1.61037 + 0.13371I$	$-9.41174 - 5.27661I$	0
$u = 1.61037 - 0.13371I$	$-9.41174 + 5.27661I$	0
$u = -1.62295 + 0.08557I$	$-10.77130 + 4.64558I$	0
$u = -1.62295 - 0.08557I$	$-10.77130 - 4.64558I$	0
$u = 1.62421 + 0.07686I$	$-14.2631 - 0.3971I$	0
$u = 1.62421 - 0.07686I$	$-14.2631 + 0.3971I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.62511 + 0.06931I$	$-9.97350 - 3.82516I$	0
$u = -1.62511 - 0.06931I$	$-9.97350 + 3.82516I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{62} - 17u^{61} + \cdots + 1847u - 113$
c_2, c_3, c_7 c_8	$u^{62} + u^{61} + \cdots - u + 1$
c_4	$u^{62} - u^{61} + \cdots + 15u + 1$
c_5, c_6, c_{11}	$u^{62} + u^{61} + \cdots - u + 1$
c_9	$u^{62} - 5u^{61} + \cdots + 640u + 304$
c_{10}, c_{12}	$u^{62} - 3u^{61} + \cdots + 55u - 9$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{62} - 11y^{61} + \cdots - 256449y + 12769$
c_2, c_3, c_7 c_8	$y^{62} - 71y^{61} + \cdots - y + 1$
c_4	$y^{62} + y^{61} + \cdots + 127y + 1$
c_5, c_6, c_{11}	$y^{62} - 51y^{61} + \cdots - y + 1$
c_9	$y^{62} + 25y^{61} + \cdots - 2665888y + 92416$
c_{10}, c_{12}	$y^{62} + 41y^{61} + \cdots - 2233y + 81$