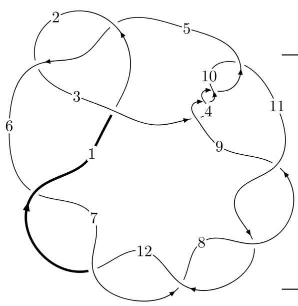
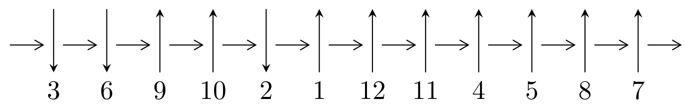
$12a_{0379}$ ($K12a_{0379}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{35} - u^{34} + \cdots + 3u^2 - 1 \rangle$$

* 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. $I_1^u = \langle u^{35} - u^{34} + \cdots + 3u^2 - 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^3 - 2u \\ u^5 - 3u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^4 - 3u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^8 - 5u^6 + 7u^4 - 2u^2 + 1 \\ -u^8 + 4u^6 - 4u^4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{12} - 7u^{10} + 17u^8 - 16u^6 + 6u^4 - 5u^2 + 1 \\ -u^{12} + 6u^{10} - 12u^8 + 8u^6 - u^4 + 2u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{16} - 9u^{14} + 31u^{12} - 50u^{10} + 39u^8 - 22u^6 + 18u^4 - 4u^2 + 1 \\ -u^{16} + 8u^{14} - 24u^{12} + 32u^{10} - 18u^8 + 8u^6 - 8u^4 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{24} - 13u^{22} + \cdots - 6u^2 + 1 \\ u^{26} - 14u^{24} + \cdots - 18u^4 + u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{20} - 11u^{18} + \cdots - 7u^2 + 1 \\ -u^{20} + 10u^{18} + \cdots - u^4 + 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{32} + 68u^{30} + 4u^{29} - 508u^{28} - 64u^{27} + 2184u^{26} + 444u^{25} - 5960u^{24} - 1744u^{23} + 10836u^{22} + 4264u^{21} - 13756u^{20} - 6804u^{19} + 13416u^{18} + 7508u^{17} - 11532u^{16} - 6528u^{15} + 8700u^{14} + 5128u^{13} - 5028u^{12} - 3288u^{11} + 2552u^{10} + 1528u^9 - 1288u^8 - 704u^7 + 328u^6 + 240u^5 - 120u^4 - 44u^3 + 16u^2 + 20u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{35} + 21u^{34} + \cdots + 6u + 1$
c_2, c_5	$u^{35} + u^{34} + \cdots + 3u^2 - 1$
c_3, c_4, c_9 c_{10}	$u^{35} - u^{34} + \cdots + 3u^2 - 1$
c_6, c_7, c_8 c_{11}, c_{12}	$u^{35} + 3u^{34} + \cdots + 12u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{35} - 13y^{34} + \cdots + 10y - 1$
c_2, c_5	$y^{35} - 21y^{34} + \cdots + 6y - 1$
c_3, c_4, c_9 c_{10}	$y^{35} - 37y^{34} + \cdots + 6y - 1$
c_6, c_7, c_8 c_{11}, c_{12}	$y^{35} + 47y^{34} + \cdots + 90y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.525071+0.695031I$	$-15.9587-7.3230I$	$-0.50203+5.74720I$
$u=-0.525071-0.695031I$	$-15.9587+7.3230I$	$-0.50203-5.74720I$
$u=-0.503644+0.700836I$	$-16.0231+2.6486I$	$-0.693389-0.151455I$
$u=-0.503644-0.700836I$	$-16.0231-2.6486I$	$-0.693389+0.151455I$
$u=\ \ 0.512719+0.691106I$	$-12.06160+2.31682I$	$2.54987-2.83092I$
$u=\ \ 0.512719-0.691106I$	$-12.06160-2.31682I$	$2.54987+2.83092I$
$u=\ \ 0.522839+0.541402I$	$-5.47274+5.77937I$	$0.47146-7.85052I$
$u=\ \ 0.522839-0.541402I$	$-5.47274-5.77937I$	$0.47146+7.85052I$
$u=\ \ 0.408454+0.569281I$	$-5.82031-1.98611I$	$-1.101715+0.333068I$
$u=\ \ 0.408454-0.569281I$	$-5.82031+1.98611I$	$-1.101715-0.333068I$
$u=-0.459588+0.502405I$	$-2.40665-1.73767I$	$3.44724+4.36626I$
$u=-0.459588-0.502405I$	$-2.40665+1.73767I$	$3.44724-4.36626I$
$u=-0.549002+0.276756I$	$-0.34953-3.08643I$	$6.48319+9.61199I$
$u=-0.549002-0.276756I$	$-0.34953+3.08643I$	$6.48319-9.61199I$
$u=\ \ 1.43209$	3.32584	2.08830
$u=-1.46088+0.14870I$	$0.217823-0.520687I$	0
$u=-1.46088-0.14870I$	$0.217823+0.520687I$	0
$u=\ \ 0.495921+0.057416I$	$0.779355+0.040720I$	$13.22367-0.76931I$
$u=\ \ 0.495921-0.057416I$	$0.779355-0.040720I$	$13.22367+0.76931I$
$u=\ \ 1.49978+0.13102I$	$4.04258+3.93448I$	$6.00000+0.I$
$u=\ \ 1.49978-0.13102I$	$4.04258-3.93448I$	$6.00000+0.I$
$u=-1.51928+0.02326I$	$7.54181-0.38720I$	$12.42967+0.I$
$u=-1.51928-0.02326I$	$7.54181+0.38720I$	$12.42967+0.I$
$u=-1.51926+0.15290I$	$1.26876-8.24991I$	$0.+7.12333I$
$u=-1.51926-0.15290I$	$1.26876+8.24991I$	$0.-7.12333I$
$u=\ \ 1.52643+0.06311I$	$6.56659+4.22789I$	$0.-6.71857I$
$u=\ \ 1.52643-0.06311I$	$6.56659-4.22789I$	$0.+6.71857I$
$u=\ \ 1.50999+0.23245I$	$-9.45605+0.74325I$	0
$u=\ \ 1.50999-0.23245I$	$-9.45605-0.74325I$	0
$u=-1.51605+0.22648I$	$-5.43016-5.65254I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.51605 - 0.22648I$	$-5.43016 + 5.65254I$	0
$u = \quad 1.52333 + 0.22907I$	$-9.25340 + 10.69110I$	0
$u = \quad 1.52333 - 0.22907I$	$-9.25340 - 10.69110I$	0
$u = -0.162727 + 0.381338I$	$-1.53270 + 0.77833I$	$-1.99796 - 0.53208I$
$u = -0.162727 - 0.381338I$	$-1.53270 - 0.77833I$	$-1.99796 + 0.53208I$

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{35} + 21u^{34} + \cdots + 6u + 1$
c_2, c_5	$u^{35} + u^{34} + \cdots + 3u^2 - 1$
c_3, c_4, c_9 c_{10}	$u^{35} - u^{34} + \cdots + 3u^2 - 1$
c_6, c_7, c_8 c_{11}, c_{12}	$u^{35} + 3u^{34} + \cdots + 12u + 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{35} - 13y^{34} + \cdots + 10y - 1$
c_2, c_5	$y^{35} - 21y^{34} + \cdots + 6y - 1$
c_3, c_4, c_9 c_{10}	$y^{35} - 37y^{34} + \cdots + 6y - 1$
c_6, c_7, c_8 c_{11}, c_{12}	$y^{35} + 47y^{34} + \cdots + 90y - 1$