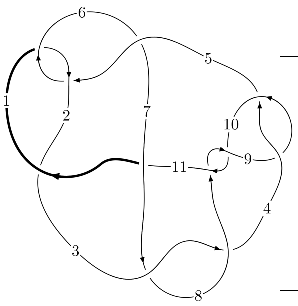
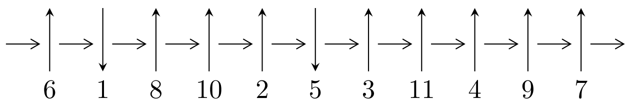
$11a_{120}$ ($K11a_{120}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{54} - u^{53} + \cdots + 3u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 54 representations.

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[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. $I_1^u = \langle u^{54} - u^{53} + \cdots + 3u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^2+1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u^3+u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ u^5+u^3+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^{10}+u^8+2u^6+u^4+u^2+1 \\ -u^{12}-2u^{10}-4u^8-4u^6-3u^4-2u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^7-2u^5-2u^3-2u \\ u^7+u^5+2u^3+u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^{26}-5u^{24}+\cdots+3u^2+1 \\ u^{26}+4u^{24}+\cdots-4u^4-3u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^{45}-8u^{43}+\cdots-4u^3-3u \\ u^{45}+7u^{43}+\cdots+5u^3+u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{17}+2u^{15}+5u^{13}+6u^{11}+7u^9+6u^7+4u^5+2u^3+u \\ -u^{19}-3u^{17}-8u^{15}-13u^{13}-17u^{11}-17u^9-12u^7-6u^5-u^3+u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{17}+2u^{15}+5u^{13}+6u^{11}+7u^9+6u^7+4u^5+2u^3+u \\ -u^{19}-3u^{17}-8u^{15}-13u^{13}-17u^{11}-17u^9-12u^7-6u^5-u^3+u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{53}+32u^{51}+\cdots-8u+14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{54} - u^{53} + \cdots + 3u - 1$
c_2, c_6	$u^{54} + 17u^{53} + \cdots - 5u + 1$
c_3, c_7	$u^{54} - u^{53} + \cdots + 5u - 25$
c_4, c_9	$u^{54} + u^{53} + \cdots - u - 1$
c_8, c_{10}	$u^{54} - 19u^{53} + \cdots - 5u + 1$
c_{11}	$u^{54} + 5u^{53} + \cdots - 5u - 21$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{54} + 17y^{53} + \cdots - 5y + 1$
c_2, c_6	$y^{54} + 41y^{53} + \cdots - 93y + 1$
c_3, c_7	$y^{54} - 39y^{53} + \cdots - 9225y + 625$
c_4, c_9	$y^{54} - 19y^{53} + \cdots - 5y + 1$
c_8, c_{10}	$y^{54} + 33y^{53} + \cdots - 13y + 1$
c_{11}	$y^{54} - 11y^{53} + \cdots + 7283y + 441$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.225158+0.985509I$	$2.66174-2.82423I$	$9.41850+4.26927I$
$u=-0.225158-0.985509I$	$2.66174+2.82423I$	$9.41850-4.26927I$
$u=\ \ 0.013188+1.020430I$	$-6.28584+2.76345I$	$-1.40260-3.24602I$
$u=\ \ 0.013188-1.020430I$	$-6.28584-2.76345I$	$-1.40260+3.24602I$
$u=-0.322299+0.910896I$	$-0.90934+3.04310I$	$5.53731-1.39630I$
$u=-0.322299-0.910896I$	$-0.90934-3.04310I$	$5.53731+1.39630I$
$u=\ \ 0.172024+1.019410I$	$-3.04751+3.37129I$	$1.74364-3.43225I$
$u=\ \ 0.172024-1.019410I$	$-3.04751-3.37129I$	$1.74364+3.43225I$
$u=-0.188352+1.032560I$	$-1.89570-8.85965I$	$3.95399+8.19419I$
$u=-0.188352-1.032560I$	$-1.89570+8.85965I$	$3.95399-8.19419I$
$u=\ \ 0.130465+0.911615I$	$-1.74890+1.55584I$	$1.72859-4.90109I$
$u=\ \ 0.130465-0.911615I$	$-1.74890-1.55584I$	$1.72859+4.90109I$
$u=-0.719799+0.809822I$	$3.52747-0.23244I$	$13.19154-1.36658I$
$u=-0.719799-0.809822I$	$3.52747+0.23244I$	$13.19154+1.36658I$
$u=-0.818638+0.718254I$	$3.52513+2.90265I$	$8.89044-0.48035I$
$u=-0.818638-0.718254I$	$3.52513-2.90265I$	$8.89044+0.48035I$
$u=\ \ 0.654895+0.871773I$	$0.94675+2.54301I$	$4.57303-2.79240I$
$u=\ \ 0.654895-0.871773I$	$0.94675-2.54301I$	$4.57303+2.79240I$
$u=\ \ 0.830157+0.717041I$	$4.86571-8.43016I$	$10.90175+5.08103I$
$u=\ \ 0.830157-0.717041I$	$4.86571+8.43016I$	$10.90175-5.08103I$
$u=-0.631705+0.643354I$	$-1.36873+3.22618I$	$6.44583-3.29326I$
$u=-0.631705-0.643354I$	$-1.36873-3.22618I$	$6.44583+3.29326I$
$u=-0.799923+0.758789I$	$4.31402+0.26912I$	$9.66102+0.I$
$u=-0.799923-0.758789I$	$4.31402-0.26912I$	$9.66102+0.I$
$u=\ \ 0.826542+0.743334I$	$9.45805-1.89794I$	$15.5987+0.I$
$u=\ \ 0.826542-0.743334I$	$9.45805+1.89794I$	$15.5987+0.I$
$u=\ \ 0.413630+0.782655I$	$-1.72347+2.04419I$	$4.15028-4.01557I$
$u=\ \ 0.413630-0.782655I$	$-1.72347-2.04419I$	$4.15028+4.01557I$
$u=\ \ 0.816023+0.773035I$	$5.87973+4.75272I$	$12.23699-4.92141I$
$u=\ \ 0.816023-0.773035I$	$5.87973-4.75272I$	$12.23699+4.92141I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.637029 + 0.965427I$	$-2.61478 + 2.76089I$	$3.34853 + 0.I$
$u = \quad 0.637029 - 0.965427I$	$-2.61478 - 2.76089I$	$3.34853 + 0.I$
$u = -0.713272 + 0.912768I$	$3.21684 - 5.24753I$	$12.07775 + 7.28540I$
$u = -0.713272 - 0.912768I$	$3.21684 + 5.24753I$	$12.07775 - 7.28540I$
$u = -0.652949 + 0.976409I$	$-2.30035 - 8.30381I$	$0. + 8.62112I$
$u = -0.652949 - 0.976409I$	$-2.30035 + 8.30381I$	$0. - 8.62112I$
$u = \quad 0.501769 + 0.617981I$	$-1.73704 + 2.07051I$	$5.30183 - 3.63568I$
$u = \quad 0.501769 - 0.617981I$	$-1.73704 - 2.07051I$	$5.30183 + 3.63568I$
$u = -0.738963 + 0.973368I$	$3.65451 - 6.06207I$	0
$u = -0.738963 - 0.973368I$	$3.65451 + 6.06207I$	0
$u = \quad 0.755217 + 0.969347I$	$5.27505 + 1.13830I$	0
$u = \quad 0.755217 - 0.969347I$	$5.27505 - 1.13830I$	0
$u = \quad 0.749443 + 0.991696I$	$8.69493 + 7.80028I$	0
$u = \quad 0.749443 - 0.991696I$	$8.69493 - 7.80028I$	0
$u = -0.735797 + 1.001920I$	$2.65813 - 8.73650I$	0
$u = -0.735797 - 1.001920I$	$2.65813 + 8.73650I$	0
$u = \quad 0.740821 + 1.006800I$	$3.9780 + 14.3126I$	0
$u = \quad 0.740821 - 1.006800I$	$3.9780 - 14.3126I$	0
$u = -0.638480 + 0.083682I$	$1.68643 - 6.22008I$	$11.41350 + 5.62288I$
$u = -0.638480 - 0.083682I$	$1.68643 + 6.22008I$	$11.41350 - 5.62288I$
$u = -0.633762$	5.79098	16.1980
$u = \quad 0.593562 + 0.088163I$	$0.459602 + 0.933389I$	$9.53888 - 0.84977I$
$u = \quad 0.593562 - 0.088163I$	$0.459602 - 0.933389I$	$9.53888 + 0.84977I$
$u = \quad 0.334907$	0.694593	14.5890

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{54} - u^{53} + \cdots + 3u - 1$
c_2, c_6	$u^{54} + 17u^{53} + \cdots - 5u + 1$
c_3, c_7	$u^{54} - u^{53} + \cdots + 5u - 25$
c_4, c_9	$u^{54} + u^{53} + \cdots - u - 1$
c_8, c_{10}	$u^{54} - 19u^{53} + \cdots - 5u + 1$
c_{11}	$u^{54} + 5u^{53} + \cdots - 5u - 21$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{54} + 17y^{53} + \cdots - 5y + 1$
c_2, c_6	$y^{54} + 41y^{53} + \cdots - 93y + 1$
c_3, c_7	$y^{54} - 39y^{53} + \cdots - 9225y + 625$
c_4, c_9	$y^{54} - 19y^{53} + \cdots - 5y + 1$
c_8, c_{10}	$y^{54} + 33y^{53} + \cdots - 13y + 1$
c_{11}	$y^{54} - 11y^{53} + \cdots + 7283y + 441$