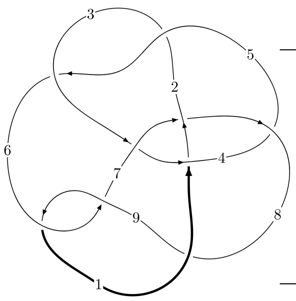
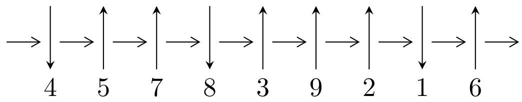
9_{32} ($K9a_6$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 216472320u^{28} - 196425840u^{27} + \cdots + 25953711149b - 196454684, \\ & -230172u^{28} - 27804388u^{27} + \cdots + 370767307a - 679741065,\ u^{29} - u^{28} + \cdots + 3u + 1 \rangle \end{aligned}$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 29 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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$$\boldsymbol{I_1^u = \langle 2.16 \times 10^8 u^{28} - 1.96 \times 10^8 u^{27} + \cdots + 2.60 \times 10^9 b - 1.96 \times 10^8,\ -2.30 \times 10^5 u^{28} - 2.78 \times 10^7 u^{27} + \cdots + 3.71 \times 10^8 a - 6.80 \times 10^8,\ u^{29} - u^{28} + \cdots + 3u + 1\rangle}$$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.000620799u^{28} + 0.0749915u^{27} + \cdots - 3.83846u + 1.83334 \\ -0.0834071u^{28} + 0.0756831u^{27} + \cdots - 2.93896u + 0.0756943 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.00281892u^{28} - 0.833272u^{27} + \cdots - 4.55210u - 0.116626 \\ 0.833292u^{28} - 0.836091u^{27} + \cdots - 3.22782u - 0.836111 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.00528313u^{28} + 0.821590u^{27} + \cdots - 0.672045u + 1.83325 \\ -0.0166708u^{28} + 0.0163909u^{27} + \cdots - 0.722782u + 0.816389 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.00446172u^{28} + 0.730031u^{27} + \cdots - 2.03460u + 2.48337 \\ 0.0666831u^{28} - 0.0655635u^{27} + \cdots - 1.10887u + 0.734444 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^3 \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^3 \\ u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{8357107928}{2595371149}u^{28} + \frac{6279939276}{2595371149}u^{27} + \cdots + \frac{205888201632}{2595371149}u + \frac{13962231674}{2595371149}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{29} - 5u^{28} + \cdots + u - 1$
c_2, c_5	$u^{29} + u^{28} + \cdots + 5u - 1$
c_3	$u^{29} - u^{28} + \cdots - u - 19$
c_4	$u^{29} + u^{28} + \cdots + 21u - 11$
c_6, c_9	$u^{29} + u^{28} + \cdots + 3u - 1$
c_7	$u^{29} + 3u^{28} + \cdots + u + 1$
c_8	$u^{29} + 11u^{28} + \cdots + 3u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{29} + 3y^{28} + \cdots - 5y - 1$
c_2, c_5	$y^{29} - 21y^{28} + \cdots - 5y - 1$
c_3	$y^{29} + 15y^{28} + \cdots + 1103y - 361$
c_4	$y^{29} + 31y^{28} + \cdots - 1869y - 121$
c_6, c_9	$y^{29} + 11y^{28} + \cdots + 3y - 1$
c_7	$y^{29} - 5y^{28} + \cdots + 3y - 1$
c_8	$y^{29} + 15y^{28} + \cdots + 175y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.647818 + 0.782212I$ $a = 1.174800 + 0.131909I$ $b = 1.35368 - 1.53216I$	$4.48635 + 0.55125I$	$10.94303 - 0.19758I$
$u = 0.647818 - 0.782212I$ $a = 1.174800 - 0.131909I$ $b = 1.35368 + 1.53216I$	$4.48635 - 0.55125I$	$10.94303 + 0.19758I$
$u = -0.559219 + 0.861588I$ $a = -2.56606 + 1.18824I$ $b = -2.19707 + 1.46012I$	$1.99105 - 2.23064I$	$-15.0558 - 8.8774I$
$u = -0.559219 - 0.861588I$ $a = -2.56606 - 1.18824I$ $b = -2.19707 - 1.46012I$	$1.99105 + 2.23064I$	$-15.0558 + 8.8774I$
$u = 0.099472 + 1.040710I$ $a = -0.040185 - 0.557055I$ $b = -0.559691 + 0.371807I$	$-3.62029 - 0.98610I$	$-3.43918 + 1.15236I$
$u = 0.099472 - 1.040710I$ $a = -0.040185 + 0.557055I$ $b = -0.559691 - 0.371807I$	$-3.62029 + 0.98610I$	$-3.43918 - 1.15236I$
$u = 0.923879 + 0.554080I$ $a = -1.061880 + 0.915307I$ $b = 0.170095 + 1.380090I$	$5.89129 - 7.10658I$	$7.40494 + 4.09137I$
$u = 0.923879 - 0.554080I$ $a = -1.061880 - 0.915307I$ $b = 0.170095 - 1.380090I$	$5.89129 + 7.10658I$	$7.40494 - 4.09137I$
$u = 0.644129 + 0.902940I$ $a = -1.03409 + 1.43901I$ $b = 0.565379 + 1.269170I$	$4.11625 + 4.48763I$	$9.60010 - 6.67821I$
$u = 0.644129 - 0.902940I$ $a = -1.03409 - 1.43901I$ $b = 0.565379 - 1.269170I$	$4.11625 - 4.48763I$	$9.60010 + 6.67821I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.528836+0.980105I$ $a=-0.540279-0.869458I$ $b=-0.347922-1.350220I$	$-0.15788-2.80514I$	$1.82209+1.85203I$
$u=-0.528836-0.980105I$ $a=-0.540279+0.869458I$ $b=-0.347922+1.350220I$	$-0.15788+2.80514I$	$1.82209-1.85203I$
$u=-1.034250+0.485851I$ $a=-0.549331-0.039451I$ $b=-0.348963-0.675392I$	$5.14963-1.80223I$	$13.69706+3.37820I$
$u=-1.034250-0.485851I$ $a=-0.549331+0.039451I$ $b=-0.348963+0.675392I$	$5.14963+1.80223I$	$13.69706-3.37820I$
$u=\ \ 0.641135+0.564919I$ $a=\ \ 1.42824-0.88660I$ $b=-0.129556-1.400390I$	$0.91572-2.15286I$	$5.11617+3.69479I$
$u=\ \ 0.641135-0.564919I$ $a=\ \ 1.42824+0.88660I$ $b=-0.129556+1.400390I$	$0.91572+2.15286I$	$5.11617-3.69479I$
$u=-0.447738+0.689000I$ $a=\ \ 1.79794-0.28016I$ $b=\ \ 1.170450+0.106145I$	$0.78940-1.37762I$	$5.11267+4.75149I$
$u=-0.447738-0.689000I$ $a=\ \ 1.79794+0.28016I$ $b=\ \ 1.170450-0.106145I$	$0.78940+1.37762I$	$5.11267-4.75149I$
$u=\ \ 0.618739+1.016340I$ $a=-1.74109+0.57301I$ $b=-1.33104+1.93207I$	$-0.38505+7.12556I$	$2.65443-8.10425I$
$u=\ \ 0.618739-1.016340I$ $a=-1.74109-0.57301I$ $b=-1.33104-1.93207I$	$-0.38505-7.12556I$	$2.65443+8.10425I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.111222 + 1.267020I$ $a = -0.303660 + 0.158824I$ $b = 0.107002 - 0.499750I$	$-1.26594 - 5.18635I$	$1.49328 + 7.03100I$
$u = -0.111222 - 1.267020I$ $a = -0.303660 - 0.158824I$ $b = 0.107002 + 0.499750I$	$-1.26594 + 5.18635I$	$1.49328 - 7.03100I$
$u = 0.708050 + 1.105240I$ $a = 1.56079 - 0.79326I$ $b = 1.27636 - 1.94848I$	$4.19521 + 13.09990I$	$5.01719 - 8.12211I$
$u = 0.708050 - 1.105240I$ $a = 1.56079 + 0.79326I$ $b = 1.27636 + 1.94848I$	$4.19521 - 13.09990I$	$5.01719 + 8.12211I$
$u = -0.770179 + 1.141350I$ $a = 0.718662 + 0.419411I$ $b = 0.461012 + 0.914365I$	$3.17430 - 4.69569I$	$8.95566 + 8.13169I$
$u = -0.770179 - 1.141350I$ $a = 0.718662 - 0.419411I$ $b = 0.461012 - 0.914365I$	$3.17430 + 4.69569I$	$8.95566 - 8.13169I$
$u = -0.195750 + 0.569252I$ $a = 1.95836 - 0.88135I$ $b = 0.778642 - 0.497191I$	$0.70687 - 1.36069I$	$4.42210 + 4.47976I$
$u = -0.195750 - 0.569252I$ $a = 1.95836 + 0.88135I$ $b = 0.778642 + 0.497191I$	$0.70687 + 1.36069I$	$4.42210 - 4.47976I$
$u = -0.272051$ $a = 3.39557$ $b = 1.06327$	2.30899	2.51260

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{29} - 5u^{28} + \cdots + u - 1$
c_2, c_5	$u^{29} + u^{28} + \cdots + 5u - 1$
c_3	$u^{29} - u^{28} + \cdots - u - 19$
c_4	$u^{29} + u^{28} + \cdots + 21u - 11$
c_6, c_9	$u^{29} + u^{28} + \cdots + 3u - 1$
c_7	$u^{29} + 3u^{28} + \cdots + u + 1$
c_8	$u^{29} + 11u^{28} + \cdots + 3u - 1$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{29} + 3y^{28} + \cdots - 5y - 1$
c_2, c_5	$y^{29} - 21y^{28} + \cdots - 5y - 1$
c_3	$y^{29} + 15y^{28} + \cdots + 1103y - 361$
c_4	$y^{29} + 31y^{28} + \cdots - 1869y - 121$
c_6, c_9	$y^{29} + 11y^{28} + \cdots + 3y - 1$
c_7	$y^{29} - 5y^{28} + \cdots + 3y - 1$
c_8	$y^{29} + 15y^{28} + \cdots + 175y - 1$