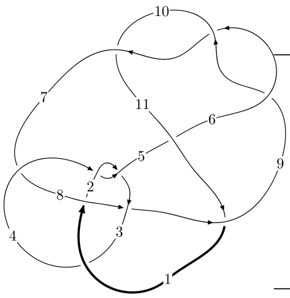
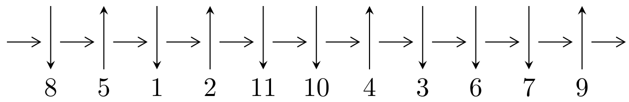
$11a_{264}$ ($K11a_{264}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.58776 \times 10^{22} u^{67} - 1.04955 \times 10^{22} u^{66} + \cdots + 6.72818 \times 10^{21} b - 1.04955 \times 10^{22},$$
$$- 1.38153 \times 10^{22} u^{67} - 3.05107 \times 10^{21} u^{66} + \cdots + 1.34564 \times 10^{22} a - 4.56619 \times 10^{22},\ u^{68} + 2u^{67} + \cdots - u +$$
$$I_2^u = \langle b - 1,\ a - 1,\ u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 69 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.

$\boldsymbol{I_1^u = \langle -1.59\times10^{22}u^{67} - 1.05\times10^{22}u^{66} + \cdots + 6.73\times10^{21}b - 1.05\times10^{22},\ -1.38\times10^{22}u^{67} - 3.05\times10^{21}u^{66} + \cdots + 1.35\times10^{22}a - 4.57\times10^{22},\ u^{68} + 2u^{67} + \cdots - u + 1\rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^4 + u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.02668u^{67} + 0.226739u^{66} + \cdots - 5.75514u + 3.39334 \\ 2.35987u^{67} + 1.55993u^{66} + \cdots - 4.15327u + 1.55993 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.05999u^{67} + 0.260761u^{66} + \cdots - 4.14749u + 3.50999 \\ 2.55846u^{67} + 1.75923u^{66} + \cdots - 4.46922u + 1.75923 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^5 - 2u^3 + u \\ u^7 - 3u^5 + 2u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.993337u^{67} + 0.193196u^{66} + \cdots - 4.92153u + 3.37667 \\ 2.56028u^{67} + 1.76014u^{66} + \cdots - 3.73681u + 1.76014 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 3.14602u^{67} + 2.35429u^{66} + \cdots - 8.42884u + 4.83181 \\ 4.94843u^{67} + 4.15426u^{66} + \cdots - 7.38265u + 4.14843 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 3.14602u^{67} + 2.35429u^{66} + \cdots - 8.42884u + 4.83181 \\ 4.94843u^{67} + 4.15426u^{66} + \cdots - 7.38265u + 4.14843 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{112903197958402042595072}{6728175072045015305047}u^{67} + \frac{107383851493598493478554}{6728175072045015305047}u^{66} + \cdots - \frac{240969492070676803449102}{6728175072045015305047}u + \frac{132818595949549446790132}{6728175072045015305047}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{68} + 4u^{67} + \cdots - u - 1$
c_2, c_4	$u^{68} + 2u^{67} + \cdots - 7u - 1$
c_3	$u^{68} - 11u^{67} + \cdots + 2u + 2$
c_5	$u^{68} - 3u^{67} + \cdots + 533u^2 - 32$
c_6, c_9, c_{10}	$u^{68} + 2u^{67} + \cdots - u + 1$
c_7	$u^{68} - 4u^{67} + \cdots + 30u - 4$
c_8	$u^{68} - 2u^{67} + \cdots + 19u - 1$
c_{11}	$u^{68} + 14u^{67} + \cdots + 18491u + 1583$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{68} + 10y^{67} + \cdots + y + 1$
c_2, c_4	$y^{68} - 42y^{67} + \cdots - 51y + 1$
c_3	$y^{68} - 9y^{67} + \cdots - 56y + 4$
c_5	$y^{68} - 9y^{67} + \cdots - 34112y + 1024$
c_6, c_9, c_{10}	$y^{68} - 62y^{67} + \cdots + y + 1$
c_7	$y^{68} - 66y^{67} + \cdots - 1036y + 16$
c_8	$y^{68} - 62y^{67} + \cdots - 127y + 1$
c_{11}	$y^{68} + 30y^{67} + \cdots + 27393653y + 2505889$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.117970 + 0.060011I$ $a = 1.62448 - 0.34631I$ $b = 0.285160 + 0.839416I$	$1.61585 - 1.78744I$	0
$u = 1.117970 - 0.060011I$ $a = 1.62448 + 0.34631I$ $b = 0.285160 - 0.839416I$	$1.61585 + 1.78744I$	0
$u = -0.789092 + 0.387196I$ $a = 0.444694 + 0.296358I$ $b = 0.781342 + 0.135971I$	$-0.858945 - 0.278785I$	$-10.90600 + 4.39760I$
$u = -0.789092 - 0.387196I$ $a = 0.444694 - 0.296358I$ $b = 0.781342 - 0.135971I$	$-0.858945 + 0.278785I$	$-10.90600 - 4.39760I$
$u = -1.18619$ $a = -2.24020$ $b = -3.55236$	-0.480843	0
$u = -0.295738 + 0.755969I$ $a = -0.356340 - 0.856592I$ $b = -0.881092 + 0.343602I$	$0.75568 + 4.48414I$	$-3.17555 - 9.83264I$
$u = -0.295738 - 0.755969I$ $a = -0.356340 + 0.856592I$ $b = -0.881092 - 0.343602I$	$0.75568 - 4.48414I$	$-3.17555 + 9.83264I$
$u = 0.654936 + 0.478263I$ $a = -0.262793 + 0.825026I$ $b = -1.09654 + 1.08775I$	$0.98004 + 8.32019I$	$-3.03705 - 4.05424I$
$u = 0.654936 - 0.478263I$ $a = -0.262793 - 0.825026I$ $b = -1.09654 - 1.08775I$	$0.98004 - 8.32019I$	$-3.03705 + 4.05424I$
$u = 0.331672 + 0.733733I$ $a = 1.27124 - 1.30760I$ $b = 1.18104 + 1.20492I$	$2.14422 - 12.53140I$	$-0.96253 + 9.09999I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.331672 - 0.733733I$ $a = 1.27124 + 1.30760I$ $b = 1.18104 - 1.20492I$	$2.14422 + 12.53140I$	$-0.96253 - 9.09999I$
$u = 1.160860 + 0.298872I$ $a = -0.857448 + 0.085533I$ $b = -0.730590 - 1.106920I$	$2.43714 - 8.63386I$	0
$u = 1.160860 - 0.298872I$ $a = -0.857448 - 0.085533I$ $b = -0.730590 + 1.106920I$	$2.43714 + 8.63386I$	0
$u = -0.510378 + 0.611213I$ $a = -0.014066 + 0.208428I$ $b = -0.251269 - 0.053760I$	$-1.07152 + 2.12045I$	$-9.29687 - 6.29711I$
$u = -0.510378 - 0.611213I$ $a = -0.014066 - 0.208428I$ $b = -0.251269 + 0.053760I$	$-1.07152 - 2.12045I$	$-9.29687 + 6.29711I$
$u = 1.202620 + 0.150968I$ $a = 0.310744 - 1.092110I$ $b = 0.502287 + 0.606881I$	$-2.07579 - 4.13960I$	0
$u = 1.202620 - 0.150968I$ $a = 0.310744 + 1.092110I$ $b = 0.502287 - 0.606881I$	$-2.07579 + 4.13960I$	0
$u = -1.222910 + 0.074096I$ $a = 0.0270535 - 0.1318130I$ $b = 0.640570 + 0.607903I$	$-2.03114 + 0.55200I$	0
$u = -1.222910 - 0.074096I$ $a = 0.0270535 + 0.1318130I$ $b = 0.640570 - 0.607903I$	$-2.03114 - 0.55200I$	0
$u = 0.034918 + 0.757439I$ $a = -0.637784 + 0.536346I$ $b = 0.536253 - 0.988592I$	$5.87942 + 4.77825I$	$3.42142 - 5.10036I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.034918 - 0.757439I$ $a = -0.637784 - 0.536346I$ $b = 0.536253 + 0.988592I$	$5.87942 - 4.77825I$	$3.42142 + 5.10036I$
$u = 0.331495 + 0.671282I$ $a = -1.13105 + 1.59075I$ $b = -0.829572 - 0.867696I$	$-1.71156 - 6.50364I$	$-3.88138 + 8.46347I$
$u = 0.331495 - 0.671282I$ $a = -1.13105 - 1.59075I$ $b = -0.829572 + 0.867696I$	$-1.71156 + 6.50364I$	$-3.88138 - 8.46347I$
$u = -1.235590 + 0.320604I$ $a = 0.635242 - 0.731984I$ $b = -0.347845 - 0.842338I$	$1.95788 - 0.88165I$	0
$u = -1.235590 - 0.320604I$ $a = 0.635242 + 0.731984I$ $b = -0.347845 + 0.842338I$	$1.95788 + 0.88165I$	0
$u = -0.380033 + 0.611430I$ $a = 0.621419 + 0.328599I$ $b = 0.088275 - 0.617332I$	$-0.94580 + 1.88496I$	$-5.53016 - 2.61970I$
$u = -0.380033 - 0.611430I$ $a = 0.621419 - 0.328599I$ $b = 0.088275 + 0.617332I$	$-0.94580 - 1.88496I$	$-5.53016 + 2.61970I$
$u = 0.269682 + 0.640466I$ $a = -1.79547 + 0.37187I$ $b = -0.388129 - 0.452372I$	$3.16652 - 4.38642I$	$3.50297 + 8.69988I$
$u = 0.269682 - 0.640466I$ $a = -1.79547 - 0.37187I$ $b = -0.388129 + 0.452372I$	$3.16652 + 4.38642I$	$3.50297 - 8.69988I$
$u = 0.519201 + 0.449531I$ $a = 0.387665 - 0.121279I$ $b = 0.876594 - 0.714920I$	$-2.56416 + 2.72527I$	$-6.71131 - 2.05471I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.519201 - 0.449531I$ $a = 0.387665 + 0.121279I$ $b = 0.876594 + 0.714920I$	$-2.56416 - 2.72527I$	$-6.71131 + 2.05471I$
$u = -0.287760 + 0.585739I$ $a = 0.62917 + 2.74974I$ $b = 2.97079 + 0.03418I$	$1.45737 + 1.91964I$	$-6.3037 + 14.5674I$
$u = -0.287760 - 0.585739I$ $a = 0.62917 - 2.74974I$ $b = 2.97079 - 0.03418I$	$1.45737 - 1.91964I$	$-6.3037 - 14.5674I$
$u = 0.200417 + 0.598294I$ $a = 0.21915 - 1.51923I$ $b = -0.151466 + 1.094540I$	$4.02663 - 0.82768I$	$6.36438 + 2.50645I$
$u = 0.200417 - 0.598294I$ $a = 0.21915 + 1.51923I$ $b = -0.151466 - 1.094540I$	$4.02663 + 0.82768I$	$6.36438 - 2.50645I$
$u = -1.387550 + 0.178659I$ $a = -1.33273 - 0.90566I$ $b = -0.1015170 + 0.0476189I$	$-3.27007 + 0.60874I$	0
$u = -1.387550 - 0.178659I$ $a = -1.33273 + 0.90566I$ $b = -0.1015170 - 0.0476189I$	$-3.27007 - 0.60874I$	0
$u = -1.384820 + 0.228430I$ $a = -0.487527 + 0.225338I$ $b = 0.152763 + 1.225140I$	$-1.04447 + 3.83678I$	0
$u = -1.384820 - 0.228430I$ $a = -0.487527 - 0.225338I$ $b = 0.152763 - 1.225140I$	$-1.04447 - 3.83678I$	0
$u = 1.40900 + 0.20274I$ $a = 3.38868 - 1.70160I$ $b = 2.12325 + 0.54726I$	$-4.40750 - 3.63166I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.40900 - 0.20274I$ $a = 3.38868 + 1.70160I$ $b = 2.12325 - 0.54726I$	$-4.40750 + 3.63166I$	0
$u = -1.40659 + 0.24898I$ $a = 2.07264 - 0.03363I$ $b = 0.499440 - 0.349829I$	$-2.19159 + 7.63799I$	0
$u = -1.40659 - 0.24898I$ $a = 2.07264 + 0.03363I$ $b = 0.499440 + 0.349829I$	$-2.19159 - 7.63799I$	0
$u = 1.41203 + 0.23084I$ $a = -3.59037 + 2.77014I$ $b = -2.98776 + 0.35138I$	$-3.98668 - 4.93837I$	0
$u = 1.41203 - 0.23084I$ $a = -3.59037 - 2.77014I$ $b = -2.98776 - 0.35138I$	$-3.98668 + 4.93837I$	0
$u = -0.299701 + 0.468468I$ $a = -0.72565 - 3.29039I$ $b = -1.96427 - 0.08421I$	$1.04787 + 1.03844I$	$5.29717 - 10.86697I$
$u = -0.299701 - 0.468468I$ $a = -0.72565 + 3.29039I$ $b = -1.96427 + 0.08421I$	$1.04787 - 1.03844I$	$5.29717 + 10.86697I$
$u = 1.44219 + 0.10422I$ $a = -1.73770 + 0.19216I$ $b = -1.083790 - 0.026822I$	$-7.53116 - 0.97636I$	0
$u = 1.44219 - 0.10422I$ $a = -1.73770 - 0.19216I$ $b = -1.083790 + 0.026822I$	$-7.53116 + 0.97636I$	0
$u = -1.44607 + 0.16100I$ $a = -1.49025 - 0.86702I$ $b = -1.051370 - 0.720721I$	$-8.77213 - 0.51707I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.44607-0.16100I$ $a=-1.49025+0.86702I$ $b=-1.051370+0.720721I$	$-8.77213+0.51707I$	0
$u=-1.43222+0.25863I$ $a=2.09232+0.57329I$ $b=0.873644-0.951829I$	$-7.36283+9.90141I$	0
$u=-1.43222-0.25863I$ $a=2.09232-0.57329I$ $b=0.873644+0.951829I$	$-7.36283-9.90141I$	0
$u=1.42820+0.29532I$ $a=1.51267-0.69056I$ $b=0.995771+0.411922I$	$-4.76047-8.29572I$	0
$u=1.42820-0.29532I$ $a=1.51267+0.69056I$ $b=0.995771-0.411922I$	$-4.76047+8.29572I$	0
$u=1.44343+0.23910I$ $a=-0.992429-0.246388I$ $b=-0.270661-0.756968I$	$-6.78935-5.03593I$	0
$u=1.44343-0.23910I$ $a=-0.992429+0.246388I$ $b=-0.270661+0.756968I$	$-6.78935+5.03593I$	0
$u=-0.535825$ $a=0.674766$ $b=0.706758$	-1.06237	-10.5390
$u=0.017671+0.533485I$ $a=1.06883-1.55896I$ $b=-0.503165+0.289761I$	$1.42554+1.52244I$	$2.08213-4.25089I$
$u=0.017671-0.533485I$ $a=1.06883+1.55896I$ $b=-0.503165-0.289761I$	$1.42554-1.52244I$	$2.08213+4.25089I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.43939+0.28439I$ $a=-2.65866-0.24548I$ $b=-1.26621+1.23765I$	$-3.5302+16.2353I$	0
$u=-1.43939-0.28439I$ $a=-2.65866+0.24548I$ $b=-1.26621-1.23765I$	$-3.5302-16.2353I$	0
$u=-1.47653+0.12229I$ $a=1.57572+1.49415I$ $b=1.21044+0.90784I$	$-5.86514-6.36902I$	0
$u=-1.47653-0.12229I$ $a=1.57572-1.49415I$ $b=1.21044-0.90784I$	$-5.86514+6.36902I$	0
$u=1.47507+0.18548I$ $a=0.701509-0.089471I$ $b=0.623036-0.135856I$	$-7.51905-4.91195I$	0
$u=1.47507-0.18548I$ $a=0.701509+0.089471I$ $b=0.623036+0.135856I$	$-7.51905+4.91195I$	0
$u=0.404020+0.224336I$ $a=1.76978-0.83709I$ $b=-0.012610-0.538393I$	$1.99649+1.29641I$	$-0.17607-2.27315I$
$u=0.404020-0.224336I$ $a=1.76978+0.83709I$ $b=-0.012610+0.538393I$	$1.99649-1.29641I$	$-0.17607+2.27315I$

II. $\boldsymbol{I_2^u = \langle b-1,\ a-1,\ u+1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_9 c_{10}, c_{11}	$u+1$
c_3, c_5	u
c_4, c_6, c_7 c_8	$u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_8 c_9, c_{10}, c_{11}	$y - 1$
c_3, c_5	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = 1.00000$ $b = 1.00000$	0	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u+1)(u^{68}+4u^{67}+\cdots-u-1)$
c_2	$(u+1)(u^{68}+2u^{67}+\cdots-7u-1)$
c_3	$u(u^{68}-11u^{67}+\cdots+2u+2)$
c_4	$(u-1)(u^{68}+2u^{67}+\cdots-7u-1)$
c_5	$u(u^{68}-3u^{67}+\cdots+533u^2-32)$
c_6	$(u-1)(u^{68}+2u^{67}+\cdots-u+1)$
c_7	$(u-1)(u^{68}-4u^{67}+\cdots+30u-4)$
c_8	$(u-1)(u^{68}-2u^{67}+\cdots+19u-1)$
c_9, c_{10}	$(u+1)(u^{68}+2u^{67}+\cdots-u+1)$
c_{11}	$(u+1)(u^{68}+14u^{67}+\cdots+18491u+1583)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^{68}+10y^{67}+\cdots+y+1)$
c_2, c_4	$(y-1)(y^{68}-42y^{67}+\cdots-51y+1)$
c_3	$y(y^{68}-9y^{67}+\cdots-56y+4)$
c_5	$y(y^{68}-9y^{67}+\cdots-34112y+1024)$
c_6, c_9, c_{10}	$(y-1)(y^{68}-62y^{67}+\cdots+y+1)$
c_7	$(y-1)(y^{68}-66y^{67}+\cdots-1036y+16)$
c_8	$(y-1)(y^{68}-62y^{67}+\cdots-127y+1)$
c_{11}	$(y-1)(y^{68}+30y^{67}+\cdots+2.73937\times 10^{7}y+2505889)$