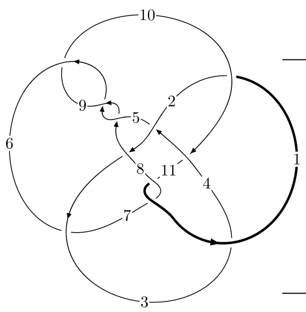
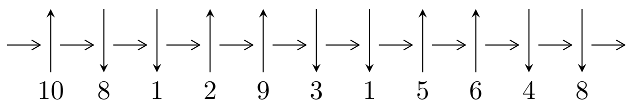
$11n_{153}$ ($K11n_{153}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -969784110565u^{17} + 7522067922888u^{16} + \cdots + 32132860254 47b - 9008416143977, \\
& 9008416143977u^{17} - 73317472411273u^{16} + \cdots + 25706288203576a - 26276930799793, \\
& u^{18} - 9u^{17} + \cdots - 33u - 8\rangle \\
I_2^u = \langle & -u^2 + b - u,\ a - u - 1,\ u^5 + 3u^4 + 3u^3 + 2u^2 + u + 1\rangle \\
I_3^u = \langle & -u^8 - 7u^7 - 17u^6 - 12u^5 + 13u^4 + 16u^3 - au - 10u^2 + b - 10u + 5,\ 15u^8a + 8u^8 + \cdots - 75a - 70, \\
& u^9 + 7u^8 + 16u^7 + 7u^6 - 19u^5 - 11u^4 + 20u^3 + 6u^2 - 11u + 3\rangle \\
I_4^u = \langle & u^2 + b + 2u + 1,\ -u^2 + a - 2u,\ u^3 + 3u^2 + 2u + 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 44 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. $\boldsymbol{I_1^u = \langle -9.70 \times 10^{11}u^{17} + 7.52 \times 10^{12}u^{16} + \cdots + 3.21 \times 10^{12}b - 9.01 \times 10^{12},\ 9.01 \times 10^{12}u^{17} - 7.33 \times 10^{13}u^{16} + \cdots + 2.57 \times 10^{13}a - 2.63 \times 10^{13},\ u^{18} - 9u^{17} + \cdots - 33u - 8\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.350436u^{17} + 2.85212u^{16} + \cdots - 14.9807u + 1.02220 \\ 0.301804u^{17} - 2.34093u^{16} + \cdots + 10.5422u + 2.80349 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0586285u^{17} - 0.559036u^{16} + \cdots + 4.76685u - 1.68018 \\ 0.0313795u^{17} - 0.210283u^{16} + \cdots + 0.745441u - 0.469028 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0993811u^{17} - 0.841718u^{16} + \cdots + 4.58790u + 0.0398829 \\ 0.0313795u^{17} - 0.210283u^{16} + \cdots - 0.254559u - 0.469028 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.350436u^{17} + 2.85212u^{16} + \cdots - 14.9807u + 1.02220 \\ 0.677118u^{17} - 5.29868u^{16} + \cdots + 23.3052u + 5.21793 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0486318u^{17} + 0.511195u^{16} + \cdots - 4.43851u + 3.82569 \\ 0.257046u^{17} - 1.94618u^{16} + \cdots + 8.50546u + 2.21542 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.291572u^{17} - 2.39120u^{16} + \cdots + 14.0411u - 0.347607 \\ -0.232943u^{17} + 1.83217u^{16} + \cdots - 8.27426u - 2.33257 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.0586285u^{17} - 0.559036u^{16} + \cdots + 5.76685u - 2.68018 \\ -0.232943u^{17} + 1.83217u^{16} + \cdots - 8.27426u - 2.33257 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.00591672u^{17} + 0.133324u^{16} + \cdots - 1.44739u + 2.47523 \\ -0.0460630u^{17} + 0.308887u^{16} + \cdots + 0.724360u + 0.154459 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.00591672u^{17} + 0.133324u^{16} + \cdots - 1.44739u + 2.47523 \\ -0.0460630u^{17} + 0.308887u^{16} + \cdots + 0.724360u + 0.154459 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$= \frac{3008625095462}{3213286025447}u^{17} - \frac{22676683370184}{3213286025447}u^{16} + \cdots + \frac{747394857451\,12}{3213286025447}u + \frac{16280782342958}{3213286025447}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{18} + 2u^{17} + \cdots - 2u + 1$
c_2	$u^{18} - 2u^{16} + \cdots - 5u - 1$
c_3	$u^{18} - 9u^{17} + \cdots - 33u - 8$
c_5, c_8, c_9	$u^{18} - 6u^{17} + \cdots + 3u + 2$
c_6, c_7, c_{11}	$u^{18} - 13u^{16} + \cdots - u + 1$
c_{10}	$u^{18} + 17u^{17} + \cdots + 4352u + 512$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{18} + 2y^{17} + \cdots - 2y + 1$
c_2	$y^{18} - 4y^{17} + \cdots - 35y + 1$
c_3	$y^{18} - 13y^{17} + \cdots - 2017y + 64$
c_5, c_8, c_9	$y^{18} - 18y^{17} + \cdots + 35y + 4$
c_6, c_7, c_{11}	$y^{18} - 26y^{17} + \cdots - 7y + 1$
c_{10}	$y^{18} - y^{17} + \cdots + 458752y + 262144$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.843032 + 0.524058I$ $a = -0.586941 + 1.246720I$ $b = 1.148160 - 0.743433I$	$2.18663 - 2.73072I$	$12.5447 + 6.6202I$
$u = 0.843032 - 0.524058I$ $a = -0.586941 - 1.246720I$ $b = 1.148160 + 0.743433I$	$2.18663 + 2.73072I$	$12.5447 - 6.6202I$
$u = 1.09266$ $a = -1.66916$ $b = 1.82383$	2.25932	7.45690
$u = -0.926749 + 0.681554I$ $a = 0.358863 - 0.335448I$ $b = 0.103949 - 0.555460I$	$3.08255 + 2.45502I$	$4.56614 - 2.39715I$
$u = -0.926749 - 0.681554I$ $a = 0.358863 + 0.335448I$ $b = 0.103949 + 0.555460I$	$3.08255 - 2.45502I$	$4.56614 + 2.39715I$
$u = -0.439225 + 1.123520I$ $a = -0.064923 + 0.354238I$ $b = 0.369476 + 0.228533I$	$0.29930 + 2.83434I$	$-6.26246 - 4.02020I$
$u = -0.439225 - 1.123520I$ $a = -0.064923 - 0.354238I$ $b = 0.369476 - 0.228533I$	$0.29930 - 2.83434I$	$-6.26246 + 4.02020I$
$u = -0.305459 + 0.432561I$ $a = -0.854284 - 0.273373I$ $b = -0.379199 + 0.286025I$	$-0.589102 + 1.103260I$	$-3.61302 - 5.14507I$
$u = -0.305459 - 0.432561I$ $a = -0.854284 + 0.273373I$ $b = -0.379199 - 0.286025I$	$-0.589102 - 1.103260I$	$-3.61302 + 5.14507I$
$u = 1.56461 + 0.17007I$ $a = 1.212670 + 0.097343I$ $b = -1.88079 - 0.35855I$	$-6.68818 - 3.40005I$	$-2.59654 + 3.50270I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.56461 - 0.17007I$ $a = 1.212670 - 0.097343I$ $b = -1.88079 + 0.35855I$	$-6.68818 + 3.40005I$	$-2.59654 - 3.50270I$
$u = -0.32355 + 1.54849I$ $a = 0.154189 - 0.448176I$ $b = -0.644108 - 0.383768I$	$5.90785 + 4.79162I$	$2.11811 - 3.69242I$
$u = -0.32355 - 1.54849I$ $a = 0.154189 + 0.448176I$ $b = -0.644108 + 0.383768I$	$5.90785 - 4.79162I$	$2.11811 + 3.69242I$
$u = 1.77246 + 0.37808I$ $a = -1.060540 + 0.004179I$ $b = 1.88134 + 0.39356I$	$-7.47923 - 8.86125I$	$-3.00235 + 6.30100I$
$u = 1.77246 - 0.37808I$ $a = -1.060540 - 0.004179I$ $b = 1.88134 - 0.39356I$	$-7.47923 + 8.86125I$	$-3.00235 - 6.30100I$
$u = -0.177652$ $a = 4.24705$ $b = 0.754498$	3.37072	0.911940
$u = 1.85738 + 0.59535I$ $a = 0.989524 - 0.084101I$ $b = -1.88799 - 0.43291I$	$-1.17978 - 13.07450I$	$0.56098 + 6.39967I$
$u = 1.85738 - 0.59535I$ $a = 0.989524 + 0.084101I$ $b = -1.88799 + 0.43291I$	$-1.17978 + 13.07450I$	$0.56098 - 6.39967I$

II. $I_2^u = \langle -u^2 + b - u,\ a - u - 1,\ u^5 + 3u^4 + 3u^3 + 2u^2 + u + 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u+1 \\ u^2+u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^4 - 3u^3 - 3u^2 - u + 1 \\ u+1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^4 + 3u^3 + 2u^2 - u - 1 \\ -u^2 - 2u - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u+1 \\ -u^3+u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 2u + 1 \\ -u^4 - 2u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 + 2u^2 + u \\ u^4 + 2u^3 + u^2 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^4 + 3u^3 + 3u^2 + 2u \\ u^4 + 2u^3 + u^2 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^4 + 2u^3 - u - 2 \\ -u^3 - 2u^2 - 2u - 2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^4 + 2u^3 - u - 2 \\ -u^3 - 2u^2 - 2u - 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -7u^4 - 19u^3 - 16u^2 - 8u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^5 - 2u^4 + u^3 + u^2 - u + 1$
c_2	$u^5 + 3u^4 + 4u^3 + 3u^2 + u + 1$
c_3	$u^5 + 3u^4 + 3u^3 + 2u^2 + u + 1$
c_5	$u^5 - u^4 - 3u^3 + 2u^2 + 3u - 1$
c_6, c_{11}	$u^5 - u^3 + 2u^2 - 2u + 1$
c_7	$u^5 - u^3 - 2u^2 - 2u - 1$
c_8, c_9	$u^5 + u^4 - 3u^3 - 2u^2 + 3u + 1$
c_{10}	$u^5 - u^4 + u^3 + u^2 - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^5 - 2y^4 + 3y^3 + y^2 - y - 1$
c_2	$y^5 - y^4 - 7y^2 - 5y - 1$
c_3	$y^5 - 3y^4 - y^3 - 4y^2 - 3y - 1$
c_5, c_8, c_9	$y^5 - 7y^4 + 19y^3 - 24y^2 + 13y - 1$
c_6, c_7, c_{11}	$y^5 - 2y^4 - 3y^3 - 1$
c_{10}	$y^5 + y^4 - y^3 - 3y^2 + 2y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.761946 + 0.720973I$ $a = 0.238054 + 0.720973I$ $b = -0.701186 - 0.377712I$	$1.60363 + 2.70217I$	$-2.62337 - 3.99219I$
$u = -0.761946 - 0.720973I$ $a = 0.238054 - 0.720973I$ $b = -0.701186 + 0.377712I$	$1.60363 - 2.70217I$	$-2.62337 + 3.99219I$
$u = 0.216341 + 0.655213I$ $a = 1.216340 + 0.655213I$ $b = -0.166160 + 0.938713I$	$8.18698 + 5.82350I$	$7.02930 - 4.66310I$
$u = 0.216341 - 0.655213I$ $a = 1.216340 - 0.655213I$ $b = -0.166160 - 0.938713I$	$8.18698 - 5.82350I$	$7.02930 + 4.66310I$
$u = -1.90879$ $a = -0.908791$ $b = 1.73469$	-6.42175	-5.81190

III.

$$I_3^u = \langle -u^8 - 7u^7 + \cdots + b + 5,\ 15u^8a + 8u^8 + \cdots - 75a - 70,\ u^9 + 7u^8 + \cdots - 11u + 3\rangle$$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} a \\ u^8 + 7u^7 + 17u^6 + 12u^5 - 13u^4 - 16u^3 + au + 10u^2 + 10u - 5 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^7a + \frac{1}{3}u^8 + \cdots - 3a - \frac{8}{3} \\ -u^7a - 5u^6a - 6u^5a + 5u^4a + 10u^3a - 4u^2a - 6au + 3a + u + 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -\frac{1}{3}u^8 - \frac{7}{3}u^7 + \cdots - a + \frac{8}{3} \\ u^8a + 5u^7a + \cdots - 3u + 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} a \\ u^8 + 7u^7 + 17u^6 + 12u^5 - 13u^4 - u^2a - 16u^3 + au + 10u^2 + 10u - 5 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^8 + 7u^7 + 17u^6 + 12u^5 - 13u^4 - 16u^3 + au + 10u^2 + a + 10u - 5 \\ 2u^7 + 11u^6 + 17u^5 - u^3a - 3u^4 - u^2a - 20u^3 + au + 4u^2 + 13u - 5 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^8a - \frac{1}{3}u^8 + \cdots + 5a + \frac{8}{3} \\ 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^8a - \frac{1}{3}u^8 + \cdots + 5a + \frac{11}{3} \\ 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{1}{3}u^8 - \frac{7}{3}u^7 + \cdots + 3a + \frac{5}{3} \\ u^5a + 3u^4a - u^5 + u^3a - 3u^4 - 2u^2a + au + 5u^2 + u - 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{1}{3}u^8 - \frac{7}{3}u^7 + \cdots + 3a + \frac{5}{3} \\ u^5a + 3u^4a - u^5 + u^3a - 3u^4 - 2u^2a + au + 5u^2 + u - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^8 - 24u^7 - 44u^6 - 8u^5 + 40u^4 - 4u^3 - 36u^2 + 8u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{18} + 7u^{17} + \cdots + 18u + 1$
c_2	$u^{18} - u^{17} + \cdots - 80u - 47$
c_3	$(u^9 + 7u^8 + 16u^7 + 7u^6 - 19u^5 - 11u^4 + 20u^3 + 6u^2 - 11u + 3)^2$
c_5, c_8, c_9	$(u^9 + u^8 - 4u^7 - 3u^6 + 5u^5 + u^4 - 2u^3 + 2u^2 + u + 1)^2$
c_6, c_7, c_{11}	$u^{18} - u^{17} + \cdots - 70u - 19$
c_{10}	$(u - 1)^{18}$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{18} - 5y^{17} + \cdots - 156y + 1$
c_2	$y^{18} - 9y^{17} + \cdots - 34788y + 2209$
c_3	$(y^9 - 17y^8 + \cdots + 85y - 9)^2$
c_5, c_8, c_9	$(y^9 - 9y^8 + 32y^7 - 55y^6 + 45y^5 - 19y^4 + 16y^3 - 10y^2 - 3y - 1)^2$
c_6, c_7, c_{11}	$y^{18} - 21y^{17} + \cdots - 3456y + 361$
c_{10}	$(y - 1)^{18}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.654621 + 0.397677I$ $a = 0.440463 - 0.049244I$ $b = 0.42962 - 1.49091I$	$6.88147 + 5.50049I$	$-0.51063 - 2.97298I$
$u = 0.654621 + 0.397677I$ $a = 0.53124 + 1.95480I$ $b = -0.307920 - 0.142926I$	$6.88147 + 5.50049I$	$-0.51063 - 2.97298I$
$u = 0.654621 - 0.397677I$ $a = 0.440463 + 0.049244I$ $b = 0.42962 + 1.49091I$	$6.88147 - 5.50049I$	$-0.51063 + 2.97298I$
$u = 0.654621 - 0.397677I$ $a = 0.53124 - 1.95480I$ $b = -0.307920 + 0.142926I$	$6.88147 - 5.50049I$	$-0.51063 + 2.97298I$
$u = 0.429712 + 0.174291I$ $a = -0.891018 - 0.617423I$ $b = -0.331141 + 1.139140I$	$0.48389 + 2.21388I$	$-3.75885 - 3.04598I$
$u = 0.429712 + 0.174291I$ $a = -0.26158 - 2.54485I$ $b = 0.275270 + 0.420610I$	$0.48389 + 2.21388I$	$-3.75885 - 3.04598I$
$u = 0.429712 - 0.174291I$ $a = -0.891018 + 0.617423I$ $b = -0.331141 - 1.139140I$	$0.48389 - 2.21388I$	$-3.75885 + 3.04598I$
$u = 0.429712 - 0.174291I$ $a = -0.26158 + 2.54485I$ $b = 0.275270 - 0.420610I$	$0.48389 - 2.21388I$	$-3.75885 + 3.04598I$
$u = -1.56322 + 0.67610I$ $a = 1.125690 + 0.064721I$ $b = -1.374430 - 0.128030I$	$-1.41694 + 3.41073I$	$-2.11762 - 4.39642I$
$u = -1.56322 + 0.67610I$ $a = -0.710837 - 0.389342I$ $b = 1.80346 - 0.65991I$	$-1.41694 + 3.41073I$	$-2.11762 - 4.39642I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.56322 - 0.67610I$ $a = 1.125690 - 0.064721I$ $b = -1.374430 + 0.128030I$	$-1.41694 - 3.41073I$	$-2.11762 + 4.39642I$
$u = -1.56322 - 0.67610I$ $a = -0.710837 + 0.389342I$ $b = 1.80346 + 0.65991I$	$-1.41694 - 3.41073I$	$-2.11762 + 4.39642I$
$u = -1.84670 + 0.28282I$ $a = -0.993459 + 0.036806I$ $b = 1.53404 + 0.13840I$	$-6.54435 + 1.10969I$	$-7.44626 - 6.23947I$
$u = -1.84670 + 0.28282I$ $a = 0.800440 + 0.197532I$ $b = -1.82421 + 0.34894I$	$-6.54435 + 1.10969I$	$-7.44626 - 6.23947I$
$u = -1.84670 - 0.28282I$ $a = -0.993459 - 0.036806I$ $b = 1.53404 - 0.13840I$	$-6.54435 - 1.10969I$	$-7.44626 + 6.23947I$
$u = -1.84670 - 0.28282I$ $a = 0.800440 - 0.197532I$ $b = -1.82421 - 0.34894I$	$-6.54435 - 1.10969I$	$-7.44626 + 6.23947I$
$u = -2.34883$ $a = 0.914908$ $b = -1.55835$	-3.74294	-6.33330
$u = -2.34883$ $a = -0.663457$ $b = 2.14896$	-3.74294	-6.33330

IV. $\boldsymbol{I^u_4 = \langle u^2 + b + 2u + 1,\ -u^2 + a - 2u,\ u^3 + 3u^2 + 2u + 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 2u \\ -u^2 - 2u - 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^2 - 2u \\ u + 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ -u^2 - 2u - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^2 + 2u \\ -2u^2 - 3u - 2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -1 \\ -2u - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u + 1 \\ u^2 + 2u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^2 + 3u + 1 \\ u^2 + 2u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2 + 2u \\ -u^2 - u - 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2 + 2u \\ -u^2 - u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -6u^2 - 17u - 3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_5 c_8, c_9	$y^3 - 2y^2 + y - 1$
c_2, c_3	$y^3 - 5y^2 - 2y - 1$
c_6, c_7, c_{11}	$y^3 - 2y^2 - 3y - 1$
c_{10}	$y^3 - y^2 + 2y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.337641 + 0.562280I$ $a = -0.877439 + 0.744862I$ $b = -0.122561 - 0.744862I$	$1.37919 + 2.82812I$	$3.95284 - 7.28057I$
$u = -0.337641 - 0.562280I$ $a = -0.877439 - 0.744862I$ $b = -0.122561 + 0.744862I$	$1.37919 - 2.82812I$	$3.95284 + 7.28057I$
$u = -2.32472$ $a = 0.754878$ $b = -1.75488$	-2.75839	4.09430

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$(u^3 - u + 1)(u^5 - 2u^4 + \cdots - u + 1)(u^{18} + 2u^{17} + \cdots - 2u + 1)$ $\cdot (u^{18} + 7u^{17} + \cdots + 18u + 1)$
c_2	$(u^3 - 3u^2 + 2u - 1)(u^5 + 3u^4 + 4u^3 + 3u^2 + u + 1)$ $\cdot (u^{18} - 2u^{16} + \cdots - 5u - 1)(u^{18} - u^{17} + \cdots - 80u - 47)$
c_3	$(u^3 + 3u^2 + 2u + 1)(u^5 + 3u^4 + 3u^3 + 2u^2 + u + 1)$ $\cdot (u^9 + 7u^8 + 16u^7 + 7u^6 - 19u^5 - 11u^4 + 20u^3 + 6u^2 - 11u + 3)^2$ $\cdot (u^{18} - 9u^{17} + \cdots - 33u - 8)$
c_5	$(u^3 - u - 1)(u^5 - u^4 - 3u^3 + 2u^2 + 3u - 1)$ $\cdot (u^9 + u^8 - 4u^7 - 3u^6 + 5u^5 + u^4 - 2u^3 + 2u^2 + u + 1)^2$ $\cdot (u^{18} - 6u^{17} + \cdots + 3u + 2)$
c_6, c_{11}	$(u^3 - 2u^2 + u - 1)(u^5 - u^3 + 2u^2 - 2u + 1)(u^{18} - 13u^{16} + \cdots - u + 1)$ $\cdot (u^{18} - u^{17} + \cdots - 70u - 19)$
c_7	$(u^3 + 2u^2 + u + 1)(u^5 - u^3 - 2u^2 - 2u - 1)(u^{18} - 13u^{16} + \cdots - u + 1)$ $\cdot (u^{18} - u^{17} + \cdots - 70u - 19)$
c_8, c_9	$(u^3 - u + 1)(u^5 + u^4 - 3u^3 - 2u^2 + 3u + 1)$ $\cdot (u^9 + u^8 - 4u^7 - 3u^6 + 5u^5 + u^4 - 2u^3 + 2u^2 + u + 1)^2$ $\cdot (u^{18} - 6u^{17} + \cdots + 3u + 2)$
c_{10}	$(u - 1)^{18}(u^3 - u^2 + 1)(u^5 - u^4 + u^3 + u^2 - 2u + 1)$ $\cdot (u^{18} + 17u^{17} + \cdots + 4352u + 512)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^3-2y^2+y-1)(y^5-2y^4+3y^3+y^2-y-1)$ $\cdot(y^{18}-5y^{17}+\cdots-156y+1)(y^{18}+2y^{17}+\cdots-2y+1)$
c_2	$(y^3-5y^2-2y-1)(y^5-y^4-7y^2-5y-1)$ $\cdot(y^{18}-9y^{17}+\cdots-34788y+2209)(y^{18}-4y^{17}+\cdots-35y+1)$
c_3	$(y^3-5y^2-2y-1)(y^5-3y^4-y^3-4y^2-3y-1)$ $\cdot((y^9-17y^8+\cdots+85y-9)^2)(y^{18}-13y^{17}+\cdots-2017y+64)$
c_5, c_8, c_9	$(y^3-2y^2+y-1)(y^5-7y^4+19y^3-24y^2+13y-1)$ $\cdot(y^9-9y^8+32y^7-55y^6+45y^5-19y^4+16y^3-10y^2-3y-1)^2$ $\cdot(y^{18}-18y^{17}+\cdots+35y+4)$
c_6, c_7, c_{11}	$(y^3-2y^2-3y-1)(y^5-2y^4-3y^3-1)(y^{18}-26y^{17}+\cdots-7y+1)$ $\cdot(y^{18}-21y^{17}+\cdots-3456y+361)$
c_{10}	$(y-1)^{18}(y^3-y^2+2y-1)(y^5+y^4-y^3-3y^2+2y-1)$ $\cdot(y^{18}-y^{17}+\cdots+458752y+262144)$