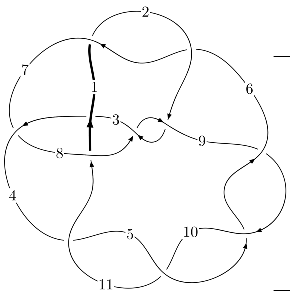
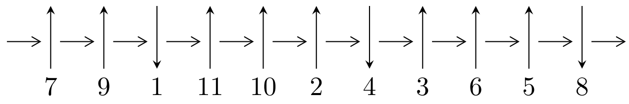
$11a_{313}$ ($K11a_{313}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -5u^{17} - 33u^{16} + \cdots + 4b - 52,\ 13u^{17} + 81u^{16} + \cdots + 8a + 96,\ u^{18} + 7u^{17} + \cdots + 76u + 8 \rangle$$
$$I_2^u = \langle -2a^5u^4 + 3a^4u^4 + \cdots + 4a + 1,\ -3a^5u^4 + 2a^4u^4 + \cdots - 19a + 171,\ u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1 \rangle$$
$$I_3^u = \langle -u^9 - 6u^7 - 12u^5 - 9u^3 - u^2 + b - 2u - 1,\ u^9 - u^8 + 7u^7 - 6u^6 + 17u^5 - 12u^4 + 17u^3 - 8u^2 + a + 6u,\ u^{10} + 7u^8 + 17u^6 + 17u^4 + u^3 + 7u^2 + 2u + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 58 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. $\boldsymbol{I^u_1 = \langle -5u^{17} - 33u^{16} + \cdots + 4b - 52,\ 13u^{17} + 81u^{16} + \cdots + 8a + 96,\ u^{18} + 7u^{17} + \cdots + 76u + 8\rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -\frac{13}{8}u^{17} - \frac{81}{8}u^{16} + \cdots - \frac{427}{4}u - 12 \\ \frac{5}{4}u^{17} + \frac{33}{4}u^{16} + \cdots + \frac{223}{2}u + 13 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -\frac{5}{8}u^{17} - \frac{35}{8}u^{16} + \cdots - 100u - 13 \\ \frac{1}{2}u^{16} + \frac{5}{2}u^{15} + \cdots + \frac{71}{2}u + 5 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -\frac{1}{8}u^{17} - \frac{5}{8}u^{16} + \cdots - \frac{5}{4}u + \frac{1}{2} \\ -\frac{1}{4}u^{17} - \frac{3}{4}u^{16} + \cdots + 4u + 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -\frac{3}{8}u^{17} - \frac{15}{8}u^{16} + \cdots + \frac{19}{4}u + 1 \\ \frac{5}{4}u^{17} + \frac{33}{4}u^{16} + \cdots + \frac{223}{2}u + 13 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{1}{8}u^{17} + \frac{5}{8}u^{16} + \cdots - \frac{107}{4}u - \frac{9}{2} \\ \frac{1}{4}u^{17} + \frac{7}{4}u^{16} + \cdots + 10u + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^3 - 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^3 - 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= u^{16} + 6u^{15} + 28u^{14} + 92u^{13} + 249u^{12} + 554u^{11} + 1049u^{10} + 1698u^9 + 2364u^8 + 2836u^7 + 2904u^6 + 2530u^5 + 1829u^4 + 1076u^3 + 490u^2 + 164u + 38$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6 c_8	$u^{18} + 10u^{16} + \cdots - 2u + 1$
c_3	$u^{18} - 16u^{17} + \cdots - 336u + 32$
c_4, c_5, c_9 c_{10}	$u^{18} - 7u^{17} + \cdots - 76u + 8$
c_7, c_{11}	$u^{18} + u^{17} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_8	$y^{18} + 20y^{17} + \cdots - 10y + 1$
c_3	$y^{18} - 2y^{17} + \cdots + 1280y + 1024$
c_4, c_5, c_9 c_{10}	$y^{18} + 21y^{17} + \cdots - 80y + 64$
c_7, c_{11}	$y^{18} - 9y^{17} + \cdots + 5y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.938094+0.127303I$ $a=-0.941408-0.790571I$ $b=\ \ 0.983772+0.621786I$	$-6.07729-5.27732I$	$-1.03667+5.17608I$
$u=-0.938094-0.127303I$ $a=-0.941408+0.790571I$ $b=\ \ 0.983772-0.621786I$	$-6.07729+5.27732I$	$-1.03667-5.17608I$
$u=-0.582885+1.040010I$ $a=-0.111385+1.230910I$ $b=-1.21523-0.83332I$	$-9.66105-10.31280I$	$-2.35535+7.07108I$
$u=-0.582885-1.040010I$ $a=-0.111385-1.230910I$ $b=-1.21523+0.83332I$	$-9.66105+10.31280I$	$-2.35535-7.07108I$
$u=-0.778632+0.958835I$ $a=\ \ 0.617064+0.421015I$ $b=-0.884150+0.263847I$	$-8.45479-0.42847I$	$-5.71443-0.57034I$
$u=-0.778632-0.958835I$ $a=\ \ 0.617064-0.421015I$ $b=-0.884150-0.263847I$	$-8.45479+0.42847I$	$-5.71443+0.57034I$
$u=-0.355230+0.629435I$ $a=\ \ 0.238746-1.335150I$ $b=\ \ 0.755577+0.624559I$	$-0.34160-2.17443I$	$5.24199+4.45398I$
$u=-0.355230-0.629435I$ $a=\ \ 0.238746+1.335150I$ $b=\ \ 0.755577-0.624559I$	$-0.34160+2.17443I$	$5.24199-4.45398I$
$u=\ \ 0.018715+1.284460I$ $a=-0.361169+0.099115I$ $b=-0.134069-0.462052I$	$-3.71490-1.64606I$	$3.60086+4.30018I$
$u=\ \ 0.018715-1.284460I$ $a=-0.361169-0.099115I$ $b=-0.134069+0.462052I$	$-3.71490+1.64606I$	$3.60086-4.30018I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.393761+0.215364I$ $a=\ \ 1.053940-0.745188I$ $b=-0.254512+0.520406I$	$0.864807-0.492874I$	$9.89914+4.36324I$
$u=-0.393761-0.215364I$ $a=\ \ 1.053940+0.745188I$ $b=-0.254512-0.520406I$	$0.864807+0.492874I$	$9.89914-4.36324I$
$u=-0.09260+1.57781I$ $a=-0.470683+0.745843I$ $b=-1.133220-0.811713I$	$-7.84988-3.77391I$	$4.41683+0.84733I$
$u=-0.09260-1.57781I$ $a=-0.470683-0.745843I$ $b=-1.133220+0.811713I$	$-7.84988+3.77391I$	$4.41683-0.84733I$
$u=-0.16290+1.73082I$ $a=\ \ 0.468027-0.863900I$ $b=\ \ 1.41901+0.95080I$	$-19.2814-13.3553I$	$-3.21813+6.04416I$
$u=-0.16290-1.73082I$ $a=\ \ 0.468027+0.863900I$ $b=\ \ 1.41901-0.95080I$	$-19.2814+13.3553I$	$-3.21813-6.04416I$
$u=-0.21462+1.75897I$ $a=\ \ 0.006873-0.548217I$ $b=\ \ 0.962821+0.129746I$	$-17.8610-4.5054I$	$-5.83423+2.80770I$
$u=-0.21462-1.75897I$ $a=\ \ 0.006873+0.548217I$ $b=\ \ 0.962821-0.129746I$	$-17.8610+4.5054I$	$-5.83423-2.80770I$

II. $\boldsymbol{I^u_2 = \langle -2a^5u^4 + 3a^4u^4 + \cdots + 4a + 1,\ -3a^5u^4 + 2a^4u^4 + \cdots - 19a + 171,\ u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} a \\ 2a^5u^4 - 3a^4u^4 + \cdots - 4a - 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -a^2u \\ -a^5u^4 - 2u^4a^2 + \cdots - 4a^2 - a \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a^4u^4 - 2u^4a^2 + \cdots + a + 4 \\ a^4u^4 - 4u^4a^2 + \cdots - 2a^2 - 2a \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 2a^5u^4 - 3a^4u^4 + \cdots - 3a - 1 \\ 2a^5u^4 - 3a^4u^4 + \cdots - 4a - 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -2a^4u^4 - u^4a^3 + \cdots + 2a - 2 \\ -a^4u^4 - u^4a^3 + \cdots + 3a - 2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^3 - 2u \\ u^4 - u^3 + 3u^2 - 2u + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^3 - 2u \\ u^4 - u^3 + 3u^2 - 2u + 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4a^5u^4 + 16a^4u^3 - 16a^4u^2 - 8a^3u^3 - 8u^4a^2 + 24a^4u + 4a^3u^2 + 28u^3a^2 - 8a^4 - 32a^2u^2 + 4u^4 + 44a^2u + 4u^3 - 16a^2 + 8au + 16u^2 - 4a + 4u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6 c_8	$u^{30} + u^{29} + \cdots + 312u + 43$
c_3	$(u^3 + u^2 - 1)^{10}$
c_4, c_5, c_9 c_{10}	$(u^5 + u^4 + 4u^3 + 3u^2 + 3u + 1)^6$
c_7, c_{11}	$u^{30} + 3u^{29} + \cdots + 54u + 77$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_8	$y^{30} + 27y^{29} + \cdots - 46776y + 1849$
c_3	$(y^3 - y^2 + 2y - 1)^{10}$
c_4, c_5, c_9 c_{10}	$(y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)^6$
c_7, c_{11}	$y^{30} - 9y^{29} + \cdots - 103632y + 5929$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.233677 + 0.885557I$ $a = -0.225781 - 0.945350I$ $b = -0.711989 - 0.202631I$	$-3.73048 - 0.61415I$	$-1.37593 - 1.24344I$
$u = 0.233677 + 0.885557I$ $a = -0.437610 - 1.062670I$ $b = -1.42316 + 0.86494I$	$-3.73048 + 5.04209I$	$-1.37593 - 7.20234I$
$u = 0.233677 + 0.885557I$ $a = -0.412268 + 0.695214I$ $b = 0.784401 - 0.420848I$	$-3.73048 - 0.61415I$	$-1.37593 - 1.24344I$
$u = 0.233677 + 0.885557I$ $a = -0.022978 + 0.780283I$ $b = -1.06610 - 1.51970I$	$-7.86806 + 2.21397I$	$-7.90519 - 4.22289I$
$u = 0.233677 + 0.885557I$ $a = 0.51667 + 1.74342I$ $b = 0.838791 - 0.635849I$	$-3.73048 + 5.04209I$	$-1.37593 - 7.20234I$
$u = 0.233677 + 0.885557I$ $a = -1.90138 + 0.70215I$ $b = -0.696354 + 0.161986I$	$-7.86806 + 2.21397I$	$-7.90519 - 4.22289I$
$u = 0.233677 - 0.885557I$ $a = -0.225781 + 0.945350I$ $b = -0.711989 + 0.202631I$	$-3.73048 + 0.61415I$	$-1.37593 + 1.24344I$
$u = 0.233677 - 0.885557I$ $a = -0.437610 + 1.062670I$ $b = -1.42316 - 0.86494I$	$-3.73048 - 5.04209I$	$-1.37593 + 7.20234I$
$u = 0.233677 - 0.885557I$ $a = -0.412268 - 0.695214I$ $b = 0.784401 + 0.420848I$	$-3.73048 + 0.61415I$	$-1.37593 + 1.24344I$
$u = 0.233677 - 0.885557I$ $a = -0.022978 - 0.780283I$ $b = -1.06610 + 1.51970I$	$-7.86806 - 2.21397I$	$-7.90519 + 4.22289I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.233677 - 0.885557I$ $a = 0.51667 - 1.74342I$ $b = 0.838791 + 0.635849I$	$-3.73048 - 5.04209I$	$-1.37593 + 7.20234I$
$u = 0.233677 - 0.885557I$ $a = -1.90138 - 0.70215I$ $b = -0.696354 - 0.161986I$	$-7.86806 - 2.21397I$	$-7.90519 + 4.22289I$
$u = 0.416284$ $a = -1.70429 + 0.71544I$ $b = 0.927316 - 0.660610I$	$-1.02849 + 2.82812I$	$7.11859 - 2.97945I$
$u = 0.416284$ $a = -1.70429 - 0.71544I$ $b = 0.927316 + 0.660610I$	$-1.02849 - 2.82812I$	$7.11859 + 2.97945I$
$u = 0.416284$ $a = 1.80155 + 1.87423I$ $b = 0.749954 - 0.780211I$	-5.16607	$-60.589325 + 0.10I$
$u = 0.416284$ $a = 1.80155 - 1.87423I$ $b = 0.749954 + 0.780211I$	-5.16607	$-60.589325 + 0.10I$
$u = 0.416284$ $a = 2.22761 + 1.58692I$ $b = -0.709470 - 0.297827I$	$-1.02849 - 2.82812I$	$7.11859 + 2.97945I$
$u = 0.416284$ $a = 2.22761 - 1.58692I$ $b = -0.709470 + 0.297827I$	$-1.02849 + 2.82812I$	$7.11859 - 2.97945I$
$u = 0.05818 + 1.69128I$ $a = 0.536946 + 0.647646I$ $b = 0.871737 - 0.114577I$	$-12.86900 + 0.50362I$	$-2.40898 + 0.61717I$
$u = 0.05818 + 1.69128I$ $a = -0.578917 - 1.066270I$ $b = -0.945552 + 0.820310I$	$-12.8690 + 6.1599I$	$-2.40898 - 5.34173I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.05818 + 1.69128I$ $a = 0.465240 + 0.575080I$ $b = 1.76968 - 1.04115I$	$-12.8690 + 6.1599I$	$-2.40898 - 5.34173I$
$u = 0.05818 + 1.69128I$ $a = 1.19026 - 0.79361I$ $b = 0.763395 + 0.134450I$	$-17.0065 + 3.3317I$	$-8.93825 - 2.36228I$
$u = 0.05818 + 1.69128I$ $a = -0.049955 - 0.517149I$ $b = -1.06411 + 0.94581I$	$-12.86900 + 0.50362I$	$-2.40898 + 0.61717I$
$u = 0.05818 + 1.69128I$ $a = 0.094911 - 0.448107I$ $b = 1.41147 + 1.96688I$	$-17.0065 + 3.3317I$	$-8.93825 - 2.36228I$
$u = 0.05818 - 1.69128I$ $a = 0.536946 - 0.647646I$ $b = 0.871737 + 0.114577I$	$-12.86900 - 0.50362I$	$-2.40898 - 0.61717I$
$u = 0.05818 - 1.69128I$ $a = -0.578917 + 1.066270I$ $b = -0.945552 - 0.820310I$	$-12.8690 - 6.1599I$	$-2.40898 + 5.34173I$
$u = 0.05818 - 1.69128I$ $a = 0.465240 - 0.575080I$ $b = 1.76968 + 1.04115I$	$-12.8690 - 6.1599I$	$-2.40898 + 5.34173I$
$u = 0.05818 - 1.69128I$ $a = 1.19026 + 0.79361I$ $b = 0.763395 - 0.134450I$	$-17.0065 - 3.3317I$	$-8.93825 + 2.36228I$
$u = 0.05818 - 1.69128I$ $a = -0.049955 + 0.517149I$ $b = -1.06411 - 0.94581I$	$-12.86900 - 0.50362I$	$-2.40898 - 0.61717I$
$u = 0.05818 - 1.69128I$ $a = 0.094911 + 0.448107I$ $b = 1.41147 - 1.96688I$	$-17.0065 - 3.3317I$	$-8.93825 + 2.36228I$

III. $\boldsymbol{I_3^u = \langle -u^9 - 6u^7 - 12u^5 - 9u^3 - u^2 + b - 2u - 1,\ u^9 - u^8 + \cdots + a + 6u,\ u^{10} + 7u^8 + 17u^6 + 17u^4 + u^3 + 7u^2 + 2u + 1 \rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^9 + u^8 - 7u^7 + 6u^6 - 17u^5 + 12u^4 - 17u^3 + 8u^2 - 6u \\ u^9 + 6u^7 + 12u^5 + 9u^3 + u^2 + 2u + 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^9 + 7u^7 - u^6 + 17u^5 - 5u^4 + 17u^3 - 6u^2 + 7u - 1 \\ -u^7 - 5u^5 - 7u^3 - 2u - 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^6 + u^5 - 5u^4 + 4u^3 - 7u^2 + 4u - 2 \\ u^8 - u^7 + 6u^6 - 5u^5 + 11u^4 - 7u^3 + 6u^2 - 2u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^8 - u^7 + 6u^6 - 5u^5 + 12u^4 - 8u^3 + 9u^2 - 4u + 1 \\ u^9 + 6u^7 + 12u^5 + 9u^3 + u^2 + 2u + 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^5 - u^4 + 4u^3 - 3u^2 + 4u - 2 \\ -u^7 + u^6 - 5u^5 + 4u^4 - 7u^3 + 4u^2 - 2u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^3 - 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^3 - 2u \\ u^5 + 3u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^9 - u^8 + 9u^7 - 9u^6 + 27u^5 - 23u^4 + 30u^3 - 17u^2 + 10u - 4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{10} + 5u^8 - u^7 + 10u^6 - 3u^5 + 9u^4 - 2u^3 + 4u^2 - u + 1$
c_2, c_6	$u^{10} + 5u^8 + u^7 + 10u^6 + 3u^5 + 9u^4 + 2u^3 + 4u^2 + u + 1$
c_3	$u^{10} + 3u^9 + 4u^8 + u^7 - 3u^6 - 2u^5 + 3u^4 + 3u^3 + 1$
c_4, c_5	$u^{10} + 7u^8 + 17u^6 + 17u^4 + u^3 + 7u^2 + 2u + 1$
c_7, c_{11}	$u^{10} - u^9 - u^8 + u^7 + 3u^6 - u^5 - u^4 + u^2 - 2u + 1$
c_9, c_{10}	$u^{10} + 7u^8 + 17u^6 + 17u^4 - u^3 + 7u^2 - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_8	$y^{10} + 10y^9 + \cdots + 7y + 1$
c_3	$y^{10} - y^9 + 4y^8 - 7y^7 + 19y^6 - 26y^5 + 29y^4 - 15y^3 + 6y^2 + 1$
c_4, c_5, c_9 c_{10}	$y^{10} + 14y^9 + \cdots + 10y + 1$
c_7, c_{11}	$y^{10} - 3y^9 + 9y^8 - 11y^7 + 15y^6 - 11y^5 + 9y^4 - y^2 - 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.383617 + 0.756267I$ $a = -0.885005 - 0.122148I$ $b = -0.247127 - 0.716158I$	$-6.79753 + 1.39846I$	$-1.69965 - 0.73977I$
$u = 0.383617 - 0.756267I$ $a = -0.885005 + 0.122148I$ $b = -0.247127 + 0.716158I$	$-6.79753 - 1.39846I$	$-1.69965 + 0.73977I$
$u = -0.177185 + 1.148900I$ $a = 0.170801 + 0.598642I$ $b = -0.718042 + 0.090163I$	$-4.71292 + 1.66512I$	$-5.84532 - 3.74292I$
$u = -0.177185 - 1.148900I$ $a = 0.170801 - 0.598642I$ $b = -0.718042 - 0.090163I$	$-4.71292 - 1.66512I$	$-5.84532 + 3.74292I$
$u = -0.06987 + 1.53463I$ $a = -0.477120 + 0.831031I$ $b = -1.24199 - 0.79027I$	$-8.56067 - 4.15690I$	$-5.16970 + 5.09058I$
$u = -0.06987 - 1.53463I$ $a = -0.477120 - 0.831031I$ $b = -1.24199 + 0.79027I$	$-8.56067 + 4.15690I$	$-5.16970 - 5.09058I$
$u = -0.211333 + 0.326245I$ $a = -0.32866 - 2.86378I$ $b = 1.003750 + 0.497986I$	$-2.02504 - 3.13412I$	$-3.07437 + 5.25222I$
$u = -0.211333 - 0.326245I$ $a = -0.32866 + 2.86378I$ $b = 1.003750 - 0.497986I$	$-2.02504 + 3.13412I$	$-3.07437 - 5.25222I$
$u = 0.07477 + 1.69713I$ $a = 0.519988 - 0.391559I$ $b = 0.703408 + 0.853209I$	$-15.7373 + 3.0886I$	$-1.21096 - 0.80248I$
$u = 0.07477 - 1.69713I$ $a = 0.519988 + 0.391559I$ $b = 0.703408 - 0.853209I$	$-15.7373 - 3.0886I$	$-1.21096 + 0.80248I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_8	$(u^{10}+5u^8-u^7+10u^6-3u^5+9u^4-2u^3+4u^2-u+1)$ $\cdot(u^{18}+10u^{16}+\cdots-2u+1)(u^{30}+u^{29}+\cdots+312u+43)$
c_2, c_6	$(u^{10}+5u^8+u^7+10u^6+3u^5+9u^4+2u^3+4u^2+u+1)$ $\cdot(u^{18}+10u^{16}+\cdots-2u+1)(u^{30}+u^{29}+\cdots+312u+43)$
c_3	$(u^3+u^2-1)^{10}(u^{10}+3u^9+4u^8+u^7-3u^6-2u^5+3u^4+3u^3+1)$ $\cdot(u^{18}-16u^{17}+\cdots-336u+32)$
c_4, c_5	$(u^5+u^4+4u^3+3u^2+3u+1)^6$ $\cdot(u^{10}+7u^8+17u^6+17u^4+u^3+7u^2+2u+1)$ $\cdot(u^{18}-7u^{17}+\cdots-76u+8)$
c_7, c_{11}	$(u^{10}-u^9+\cdots-2u+1)(u^{18}+u^{17}+\cdots-u+1)$ $\cdot(u^{30}+3u^{29}+\cdots+54u+77)$
c_9, c_{10}	$(u^5+u^4+4u^3+3u^2+3u+1)^6$ $\cdot(u^{10}+7u^8+17u^6+17u^4-u^3+7u^2-2u+1)$ $\cdot(u^{18}-7u^{17}+\cdots-76u+8)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_8	$(y^{10} + 10y^9 + \cdots + 7y + 1)(y^{18} + 20y^{17} + \cdots - 10y + 1)$ $\cdot (y^{30} + 27y^{29} + \cdots - 46776y + 1849)$
c_3	$(y^3 - y^2 + 2y - 1)^{10}$ $\cdot (y^{10} - y^9 + 4y^8 - 7y^7 + 19y^6 - 26y^5 + 29y^4 - 15y^3 + 6y^2 + 1)$ $\cdot (y^{18} - 2y^{17} + \cdots + 1280y + 1024)$
c_4, c_5, c_9 c_{10}	$((y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)^6)(y^{10} + 14y^9 + \cdots + 10y + 1)$ $\cdot (y^{18} + 21y^{17} + \cdots - 80y + 64)$
c_7, c_{11}	$(y^{10} - 3y^9 + 9y^8 - 11y^7 + 15y^6 - 11y^5 + 9y^4 - y^2 - 2y + 1)$ $\cdot (y^{18} - 9y^{17} + \cdots + 5y + 1)(y^{30} - 9y^{29} + \cdots - 103632y + 5929)$