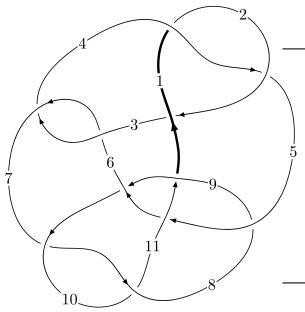
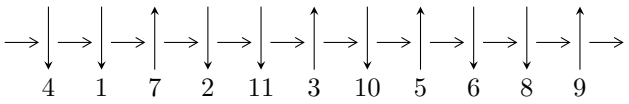
$11a_{19}$ ($K11a_{19}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -4.87320 \times 10^{210} u^{81} - 1.20023 \times 10^{211} u^{80} + \cdots + 9.45125 \times 10^{210} b + 3.16425 \times 10^{211}, \\ & - 3.92506 \times 10^{210} u^{81} - 1.98955 \times 10^{211} u^{80} + \cdots + 9.45125 \times 10^{210} a + 1.04962 \times 10^{212}, \\ & u^{82} + 2u^{81} + \cdots - 14u + 1 \rangle \\ I_2^u = \langle & b,\ u^4 + 2u^3 - u^2 + a - 2u + 1,\ u^5 + u^4 - 2u^3 - u^2 + u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 87 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. $\boldsymbol{I_1^u = \langle -4.87 \times 10^{210} u^{81} - 1.20 \times 10^{211} u^{80} + \cdots + 9.45 \times 10^{210} b + 3.16 \times 10^{211},\ -3.93 \times 10^{210} u^{81} - 1.99 \times 10^{211} u^{80} + \cdots + 9.45 \times 10^{210} a + 1.05 \times 10^{212},\ u^{82} + 2u^{81} + \cdots - 14u + 1 \rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.415295u^{81} + 2.10506u^{80} + \cdots + 60.6066u - 11.1056 \\ 0.515615u^{81} + 1.26991u^{80} + \cdots + 34.9413u - 3.34798 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -0.100320u^{81} + 0.835147u^{80} + \cdots + 25.6654u - 7.75762 \\ 0.515615u^{81} + 1.26991u^{80} + \cdots + 34.9413u - 3.34798 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -3.43660u^{81} - 6.69037u^{80} + \cdots - 178.963u + 19.1560 \\ 0.576262u^{81} + 1.37956u^{80} + \cdots + 35.0206u - 4.11670 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -3.52357u^{81} - 6.81623u^{80} + \cdots - 181.274u + 19.5081 \\ 0.650978u^{81} + 1.56146u^{80} + \cdots + 38.0919u - 4.51689 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 3.00786u^{81} + 6.93064u^{80} + \cdots + 127.142u - 16.1937 \\ -0.830021u^{81} - 1.31043u^{80} + \cdots - 9.56980u + 1.53913 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.391728u^{81} - 0.569793u^{80} + \cdots - 11.0911u + 0.107632 \\ 0.209315u^{81} + 0.531440u^{80} + \cdots + 14.4741u - 1.32129 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.27363u^{81} - 1.06364u^{80} + \cdots - 21.3993u - 3.22549 \\ 0.928834u^{81} + 2.25698u^{80} + \cdots + 59.9874u - 6.00986 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.27363u^{81} - 1.06364u^{80} + \cdots - 21.3993u - 3.22549 \\ 0.928834u^{81} + 2.25698u^{80} + \cdots + 59.9874u - 6.00986 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -5.57351u^{81} - 11.9801u^{80} + \cdots - 75.2514u + 4.08934$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{82} - 6u^{81} + \cdots + 8u - 1$
c_2	$u^{82} + 42u^{81} + \cdots + 32u + 1$
c_3, c_6	$u^{82} - u^{81} + \cdots + 160u + 32$
c_5	$u^{82} - 6u^{81} + \cdots + 2u - 1$
c_7, c_{10}	$u^{82} - 2u^{81} + \cdots + 14u + 1$
c_8	$u^{82} - 2u^{81} + \cdots - 2362u - 484$
c_9	$u^{82} + 2u^{81} + \cdots - 20520u - 1647$
c_{11}	$u^{82} + 14u^{81} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{82} - 42y^{81} + \cdots - 32y + 1$
c_2	$y^{82} + 2y^{81} + \cdots - 484y + 1$
c_3, c_6	$y^{82} - 33y^{81} + \cdots - 19968y + 1024$
c_5	$y^{82} - 14y^{81} + \cdots - 6y + 1$
c_7, c_{10}	$y^{82} - 58y^{81} + \cdots + 14y + 1$
c_8	$y^{82} + 90y^{81} + \cdots + 10862436y + 234256$
c_9	$y^{82} + 50y^{81} + \cdots - 261288342y + 2712609$
c_{11}	$y^{82} + 6y^{81} + \cdots + 14y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.372669+0.922938I$ $a=-0.285302+0.713657I$ $b=\ \ 1.210700-0.018520I$	$5.22827-3.35824I$	0
$u=-0.372669-0.922938I$ $a=-0.285302-0.713657I$ $b=\ \ 1.210700+0.018520I$	$5.22827+3.35824I$	0
$u=\ \ 0.111866+0.982814I$ $a=\ \ 1.122340+0.776633I$ $b=-0.795431+0.455251I$	$-2.09067-2.95787I$	0
$u=\ \ 0.111866-0.982814I$ $a=\ \ 1.122340-0.776633I$ $b=-0.795431-0.455251I$	$-2.09067+2.95787I$	0
$u=-0.948714+0.407094I$ $a=-0.318376-0.441347I$ $b=-1.406120-0.046993I$	$3.48456+2.48996I$	0
$u=-0.948714-0.407094I$ $a=-0.318376+0.441347I$ $b=-1.406120+0.046993I$	$3.48456-2.48996I$	0
$u=\ \ 1.037470+0.112404I$ $a=-0.90746+3.49927I$ $b=-0.959272+0.364632I$	$-0.006489-1.319230I$	0
$u=\ \ 1.037470-0.112404I$ $a=-0.90746-3.49927I$ $b=-0.959272-0.364632I$	$-0.006489+1.319230I$	0
$u=\ \ 1.043930+0.027951I$ $a=\ \ 3.12377+3.75803I$ $b=\ \ 0.502899+0.690068I$	$-3.74856-1.03244I$	0
$u=\ \ 1.043930-0.027951I$ $a=\ \ 3.12377-3.75803I$ $b=\ \ 0.502899-0.690068I$	$-3.74856+1.03244I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.924124 + 0.155896I$ $a = -1.74666 + 0.78782I$ $b = 0.137431 + 0.591455I$	$-2.85067 - 0.96287I$	0
$u = 0.924124 - 0.155896I$ $a = -1.74666 - 0.78782I$ $b = 0.137431 - 0.591455I$	$-2.85067 + 0.96287I$	0
$u = -0.528336 + 0.760241I$ $a = 0.090830 - 1.282120I$ $b = -1.209490 - 0.228611I$	$4.80113 + 1.92406I$	0
$u = -0.528336 - 0.760241I$ $a = 0.090830 + 1.282120I$ $b = -1.209490 + 0.228611I$	$4.80113 - 1.92406I$	0
$u = -1.062450 + 0.212626I$ $a = -0.49224 - 1.74839I$ $b = -1.17978 - 0.78731I$	$0.01560 + 3.91593I$	0
$u = -1.062450 - 0.212626I$ $a = -0.49224 + 1.74839I$ $b = -1.17978 + 0.78731I$	$0.01560 - 3.91593I$	0
$u = 0.055196 + 1.089590I$ $a = 0.226034 - 0.928899I$ $b = -0.518282 - 0.941047I$	$-1.46560 - 5.42569I$	0
$u = 0.055196 - 1.089590I$ $a = 0.226034 + 0.928899I$ $b = -0.518282 + 0.941047I$	$-1.46560 + 5.42569I$	0
$u = 1.09577$ $a = -5.87610$ $b = 0.385176$	-3.80714	0
$u = -1.087480 + 0.153969I$ $a = -0.10618 - 1.58690I$ $b = -0.214732 - 1.243670I$	$-2.85407 + 3.43010I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.087480-0.153969I$ $a=-0.10618+1.58690I$ $b=-0.214732+1.243670I$	$-2.85407-3.43010I$	0
$u=-1.099320+0.078865I$ $a=\ \ 0.76703-1.64881I$ $b=\ \ 0.713526-1.219340I$	$-4.70519+2.39134I$	0
$u=-1.099320-0.078865I$ $a=\ \ 0.76703+1.64881I$ $b=\ \ 0.713526+1.219340I$	$-4.70519-2.39134I$	0
$u=-1.115110+0.022821I$ $a=\ \ 0.240080-1.062120I$ $b=\ \ 1.243650-0.511416I$	$-5.52870+0.86398I$	0
$u=-1.115110-0.022821I$ $a=\ \ 0.240080+1.062120I$ $b=\ \ 1.243650+0.511416I$	$-5.52870-0.86398I$	0
$u=\ \ 1.121470+0.103386I$ $a=\ \ 1.55262-3.24881I$ $b=\ \ 1.050130-0.595633I$	$-2.13971-6.01246I$	0
$u=\ \ 1.121470-0.103386I$ $a=\ \ 1.55262+3.24881I$ $b=\ \ 1.050130+0.595633I$	$-2.13971+6.01246I$	0
$u=\ \ 0.817286+0.838746I$ $a=-0.177044-0.087912I$ $b=\ \ 0.879104+0.018096I$	$-0.34685-2.85468I$	0
$u=\ \ 0.817286-0.838746I$ $a=-0.177044+0.087912I$ $b=\ \ 0.879104-0.018096I$	$-0.34685+2.85468I$	0
$u=-0.041190+1.176220I$ $a=-0.356813-0.500680I$ $b=\ \ 1.110290-0.524652I$	$2.93914-6.11947I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.041190-1.176220I$ $a=-0.356813+0.500680I$ $b=\ \ 1.110290+0.524652I$	$2.93914+6.11947I$	0
$u=\ \ 0.783636+0.165518I$ $a=\ \ 0.38779+2.04319I$ $b=-0.959378-0.173898I$	$0.603497+0.216471I$	$-3.00000-5.07001I$
$u=\ \ 0.783636-0.165518I$ $a=\ \ 0.38779-2.04319I$ $b=-0.959378+0.173898I$	$0.603497-0.216471I$	$-3.00000+5.07001I$
$u=-1.085630+0.509853I$ $a=\ \ 0.180279+0.797287I$ $b=\ \ 1.382850+0.228355I$	$2.97750+8.50086I$	0
$u=-1.085630-0.509853I$ $a=\ \ 0.180279-0.797287I$ $b=\ \ 1.382850-0.228355I$	$2.97750-8.50086I$	0
$u=-1.190570+0.263500I$ $a=\ \ 0.40339+1.85670I$ $b=\ \ 1.16152+0.83000I$	$-3.13741+9.59200I$	0
$u=-1.190570-0.263500I$ $a=\ \ 0.40339-1.85670I$ $b=\ \ 1.16152-0.83000I$	$-3.13741-9.59200I$	0
$u=\ \ 0.516137+1.108300I$ $a=-0.114506-0.399456I$ $b=-0.916579-0.485003I$	$-1.65757+0.93442I$	0
$u=\ \ 0.516137-1.108300I$ $a=-0.114506+0.399456I$ $b=-0.916579+0.485003I$	$-1.65757-0.93442I$	0
$u=-0.014957+0.768895I$ $a=-0.717422+0.722948I$ $b=\ \ 0.134543+0.766173I$	$0.28541-1.54658I$	$-0.57343+2.06881I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.014957-0.768895I$ $a=-0.717422-0.722948I$ $b=\ 0.134543-0.766173I$	$0.28541+1.54658I$	$-0.57343-2.06881I$
$u=\ 0.025777+1.279070I$ $a=\ 0.180112+0.766794I$ $b=-1.131140+0.685484I$	$0.45408-11.38860I$	0
$u=\ 0.025777-1.279070I$ $a=\ 0.180112-0.766794I$ $b=-1.131140-0.685484I$	$0.45408+11.38860I$	0
$u=\ 0.586949+0.306956I$ $a=-0.394714-1.242930I$ $b=\ 1.013700+0.500772I$	$-0.96667+4.63901I$	$-3.87963-8.57640I$
$u=\ 0.586949-0.306956I$ $a=-0.394714+1.242930I$ $b=\ 1.013700-0.500772I$	$-0.96667-4.63901I$	$-3.87963+8.57640I$
$u=\ 1.34181$ $a=\ 0.104308$ $b=\ 0.435201$	-2.55123	0
$u=-1.294620+0.433035I$ $a=\ 0.629514-1.164780I$ $b=\ 0.399119-1.045250I$	$-3.71598+6.06156I$	0
$u=-1.294620-0.433035I$ $a=\ 0.629514+1.164780I$ $b=\ 0.399119+1.045250I$	$-3.71598-6.06156I$	0
$u=-1.42187+0.12543I$ $a=\ 0.601248+0.581607I$ $b=\ 0.535579+0.443898I$	$-7.77694+4.95365I$	0
$u=-1.42187-0.12543I$ $a=\ 0.601248-0.581607I$ $b=\ 0.535579-0.443898I$	$-7.77694-4.95365I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.34855+0.46968I$ $a=\ \ 0.39620-1.58221I$ $b=-1.033970-0.543976I$	$-6.58899+8.11200I$	0
$u=-1.34855-0.46968I$ $a=\ \ 0.39620+1.58221I$ $b=-1.033970+0.543976I$	$-6.58899-8.11200I$	0
$u=-1.36225+0.50910I$ $a=-0.87526+1.16446I$ $b=-0.617126+1.091420I$	$-5.89382+11.02700I$	0
$u=-1.36225-0.50910I$ $a=-0.87526-1.16446I$ $b=-0.617126-1.091420I$	$-5.89382-11.02700I$	0
$u=-1.36047+0.56106I$ $a=-0.02227+1.66535I$ $b=\ \ 1.189870+0.667621I$	$-1.22744+12.16920I$	0
$u=-1.36047-0.56106I$ $a=-0.02227-1.66535I$ $b=\ \ 1.189870-0.667621I$	$-1.22744-12.16920I$	0
$u=-1.46239+0.32296I$ $a=-0.756015+0.523946I$ $b=-0.596900+0.506514I$	$-8.00907+3.75643I$	0
$u=-1.46239-0.32296I$ $a=-0.756015-0.523946I$ $b=-0.596900-0.506514I$	$-8.00907-3.75643I$	0
$u=\ \ 1.31960+0.71550I$ $a=-0.208693-1.217520I$ $b=\ \ 0.940672-0.500766I$	$-1.85423-3.78257I$	0
$u=\ \ 1.31960-0.71550I$ $a=-0.208693+1.217520I$ $b=\ \ 0.940672+0.500766I$	$-1.85423+3.78257I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.43309 + 0.47733I$ $a = 0.54768 + 1.85069I$ $b = -0.676418 + 0.654214I$	$-5.91812 - 0.62603I$	0
$u = 1.43309 - 0.47733I$ $a = 0.54768 - 1.85069I$ $b = -0.676418 - 0.654214I$	$-5.91812 + 0.62603I$	0
$u = 1.39410 + 0.58186I$ $a = -0.362073 - 1.189890I$ $b = -0.603714 - 0.799274I$	$-5.73183 - 3.04738I$	0
$u = 1.39410 - 0.58186I$ $a = -0.362073 + 1.189890I$ $b = -0.603714 + 0.799274I$	$-5.73183 + 3.04738I$	0
$u = 1.49404 + 0.24932I$ $a = 0.416319 + 0.504070I$ $b = 0.717839 + 0.375621I$	$-2.65606 + 0.12519I$	0
$u = 1.49404 - 0.24932I$ $a = 0.416319 - 0.504070I$ $b = 0.717839 - 0.375621I$	$-2.65606 - 0.12519I$	0
$u = -1.41333 + 0.57602I$ $a = -0.03235 - 1.85061I$ $b = -1.169980 - 0.781904I$	$-4.0922 + 17.7863I$	0
$u = -1.41333 - 0.57602I$ $a = -0.03235 + 1.85061I$ $b = -1.169980 + 0.781904I$	$-4.0922 - 17.7863I$	0
$u = 0.017201 + 0.444698I$ $a = -0.421573 + 0.688439I$ $b = 1.140810 - 0.618738I$	$0.34729 - 6.79546I$	$-2.04718 + 3.52041I$
$u = 0.017201 - 0.444698I$ $a = -0.421573 - 0.688439I$ $b = 1.140810 + 0.618738I$	$0.34729 + 6.79546I$	$-2.04718 - 3.52041I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.047106 + 0.410466I$ $a = -1.47054 - 0.16933I$ $b = -0.217093 + 0.544112I$	$0.041508 - 1.376630I$	$0.16544 + 4.98668I$
$u = \quad 0.047106 - 0.410466I$ $a = -1.47054 + 0.16933I$ $b = -0.217093 - 0.544112I$	$0.041508 + 1.376630I$	$0.16544 - 4.98668I$
$u = \quad 1.46595 + 0.77759I$ $a = -0.08409 + 1.44082I$ $b = -1.043820 + 0.658784I$	$-4.37377 - 8.54127I$	0
$u = \quad 1.46595 - 0.77759I$ $a = -0.08409 - 1.44082I$ $b = -1.043820 - 0.658784I$	$-4.37377 + 8.54127I$	0
$u = -0.116621 + 0.310795I$ $a = -0.295025 - 1.350840I$ $b = -1.130240 + 0.389337I$	$2.44851 - 1.57419I$	$1.58009 - 0.44639I$
$u = -0.116621 - 0.310795I$ $a = -0.295025 + 1.350840I$ $b = -1.130240 - 0.389337I$	$2.44851 + 1.57419I$	$1.58009 + 0.44639I$
$u = \quad 1.67621 + 0.41894I$ $a = -0.801743 - 0.790902I$ $b = -0.973653 - 0.605011I$	$-5.00012 + 4.29669I$	0
$u = \quad 1.67621 - 0.41894I$ $a = -0.801743 + 0.790902I$ $b = -0.973653 + 0.605011I$	$-5.00012 - 4.29669I$	0
$u = \quad 0.182502 + 0.012960I$ $a = -5.67324 + 0.60050I$ $b = \quad 0.570425 + 0.460109I$	$-2.36954 - 0.63816I$	$-5.46759 - 1.52326I$
$u = \quad 0.182502 - 0.012960I$ $a = -5.67324 - 0.60050I$ $b = \quad 0.570425 - 0.460109I$	$-2.36954 + 0.63816I$	$-5.46759 + 1.52326I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.054094 + 0.154978I$		
$a = -4.35975 - 0.04873I$	$-1.87549 - 1.38403I$	$-4.93593 + 0.98614I$
$b = 0.408288 + 0.821403I$		
$u = 0.054094 - 0.154978I$		
$a = -4.35975 + 0.04873I$	$-1.87549 + 1.38403I$	$-4.93593 - 0.98614I$
$b = 0.408288 - 0.821403I$		

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^4-7u^3+2u^2+6u-7$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^5$
c_3, c_6	y^5
c_5	$y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1$
c_7, c_9, c_{10}	$y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1$
c_8, c_{11}	$y^5 + 3y^4 + 4y^3 + y^2 - y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.21774$ $a = -2.89210$ $b = 0$	-4.04602	-15.9650
$u = 0.309916 + 0.549911I$ $a = -0.01014 + 1.59703I$ $b = 0$	$-1.97403 - 1.53058I$	$-3.57269 + 4.45807I$
$u = 0.309916 - 0.549911I$ $a = -0.01014 - 1.59703I$ $b = 0$	$-1.97403 + 1.53058I$	$-3.57269 - 4.45807I$
$u = -1.41878 + 0.21917I$ $a = -0.043806 - 0.365575I$ $b = 0$	$-7.51750 + 4.40083I$	$-3.44484 - 1.78781I$
$u = -1.41878 - 0.21917I$ $a = -0.043806 + 0.365575I$ $b = 0$	$-7.51750 - 4.40083I$	$-3.44484 + 1.78781I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^5)(u^{82}-6u^{81}+\cdots+8u-1)$
c_2	$((u+1)^5)(u^{82}+42u^{81}+\cdots+32u+1)$
c_3, c_6	$u^5(u^{82}-u^{81}+\cdots+160u+32)$
c_4	$((u+1)^5)(u^{82}-6u^{81}+\cdots+8u-1)$
c_5	$(u^5-3u^4+4u^3-u^2-u+1)(u^{82}-6u^{81}+\cdots+2u-1)$
c_7	$(u^5+u^4-2u^3-u^2+u-1)(u^{82}-2u^{81}+\cdots+14u+1)$
c_8	$(u^5+u^4+2u^3+u^2+u+1)(u^{82}-2u^{81}+\cdots-2362u-484)$
c_9	$(u^5-u^4-2u^3+u^2+u+1)(u^{82}+2u^{81}+\cdots-20520u-1647)$
c_{10}	$(u^5-u^4-2u^3+u^2+u+1)(u^{82}-2u^{81}+\cdots+14u+1)$
c_{11}	$(u^5+u^4+2u^3+u^2+u+1)(u^{82}+14u^{81}+\cdots+2u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y-1)^5)(y^{82} - 42y^{81} + \cdots - 32y + 1)$
c_2	$((y-1)^5)(y^{82} + 2y^{81} + \cdots - 484y + 1)$
c_3, c_6	$y^5(y^{82} - 33y^{81} + \cdots - 19968y + 1024)$
c_5	$(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)(y^{82} - 14y^{81} + \cdots - 6y + 1)$
c_7, c_{10}	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)(y^{82} - 58y^{81} + \cdots + 14y + 1)$
c_8	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)$ $\cdot (y^{82} + 90y^{81} + \cdots + 10862436y + 234256)$
c_9	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)$ $\cdot (y^{82} + 50y^{81} + \cdots - 261288342y + 2712609)$
c_{11}	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)(y^{82} + 6y^{81} + \cdots + 14y + 1)$