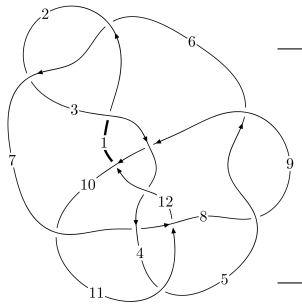
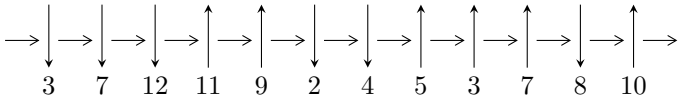
$12n_{0588}$ $(K12n_{0588})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$\underset{c_7}{4,7} \to \underset{c_3}{8,12} \to \underset{c_2}{3} \longrightarrow \underset{c_1}{2} \longrightarrow \underset{c_6}{1} \longrightarrow \underset{c_{11}}{6} \to \underset{c_4}{11} \to \underset{c_{10}}{5} \to \underset{c_9}{10} \to 9 \twoheadrightarrow c_5, c_8, c_{12}$$

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

$$\begin{aligned} I_1^u = \langle & -1.27157 \times 10^{201} u^{63} + 4.53753 \times 10^{202} u^{62} + \cdots + 4.88020 \times 10^{203} b + 5.65168 \times 10^{203}, \\ & - 8.48877 \times 10^{202} u^{63} + 3.19137 \times 10^{203} u^{62} + \cdots + 4.88020 \times 10^{203} a + 4.32696 \times 10^{204}, \\ & u^{64} - 3u^{63} + \cdots + 9u + 1 \rangle \\ I_2^u = \langle & 11150600999535 u^{21} - 14783938671492 u^{20} + \cdots + 6959144640989 b + 6978556189620, \\ & 68211367039889 u^{21} - 98301657351572 u^{20} + \cdots + 6959144640989 a + 42747854441200, \\ & u^{22} - 2u^{21} + \cdots - 2u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 86 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. $\boldsymbol{I_1^u = \langle -1.27 \times 10^{201} u^{63} + 4.54 \times 10^{202} u^{62} + \cdots + 4.88 \times 10^{203} b + 5.65 \times 10^{203},\ -8.49 \times 10^{202} u^{63} + 3.19 \times 10^{203} u^{62} + \cdots + 4.88 \times 10^{203} a + 4.33 \times 10^{204},\ u^{64} - 3u^{63} + \cdots + 9u + 1 \rangle}$

(i) Arc colorings

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

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

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

$$a_{12} = \begin{pmatrix} 0.173943u^{63} - 0.653942u^{62} + \cdots - 7.97727u - 8.86637 \\ 0.00260557u^{63} - 0.0929784u^{62} + \cdots - 5.15924u - 1.15808 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.45092u^{63} - 7.73517u^{62} + \cdots + 96.0329u + 1.67519 \\ 0.298291u^{63} - 0.938637u^{62} + \cdots + 8.62009u + 0.0738241 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.74921u^{63} - 8.67381u^{62} + \cdots + 104.653u + 1.74901 \\ 0.298291u^{63} - 0.938637u^{62} + \cdots + 8.62009u + 0.0738241 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.785214u^{63} + 2.30228u^{62} + \cdots - 45.6518u - 11.3768 \\ 0.0982812u^{63} - 0.446815u^{62} + \cdots - 4.70790u - 0.845415 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.72840u^{63} - 8.38407u^{62} + \cdots + 128.985u + 8.01125 \\ 0.206745u^{63} - 0.717715u^{62} + \cdots + 6.00433u - 0.407776 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.190318u^{63} - 0.794890u^{62} + \cdots - 14.1516u - 10.1566 \\ 0.0430267u^{63} - 0.228287u^{62} + \cdots - 4.34921u - 1.06626 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 2.91738u^{63} - 9.20280u^{62} + \cdots + 106.391u + 0.595014 \\ 0.172195u^{63} - 0.530154u^{62} + \cdots + 5.86731u - 0.320917 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.147291u^{63} - 0.566603u^{62} + \cdots - 9.80237u - 9.09030 \\ 0.0430267u^{63} - 0.228287u^{62} + \cdots - 4.34921u - 1.06626 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 4.19462u^{63} - 13.2279u^{62} + \cdots + 159.234u + 3.94471 \\ 0.430364u^{63} - 1.40465u^{62} + \cdots + 11.1768u - 0.195577 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.166269u^{63} + 0.633459u^{62} + \cdots - 0.558660u - 1.79988$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{64}+81u^{63}+\cdots+20217u+961$
c_2, c_6	$u^{64}-u^{63}+\cdots-335u+31$
c_3	$u^{64}-5u^{63}+\cdots-649u+91$
c_4	$u^{64}-u^{62}+\cdots+22u+1$
c_5, c_8	$u^{64}-u^{63}+\cdots+184u+68$
c_7	$u^{64}+3u^{63}+\cdots-9u+1$
c_9	$u^{64}+46u^{62}+\cdots-120919u+79381$
c_{10}	$u^{64}-u^{63}+\cdots-4829u+811$
c_{11}	$u^{64}+5u^{63}+\cdots-399u+73$
c_{12}	$u^{64}-4u^{63}+\cdots-163376u+24613$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{64} - 185y^{63} + \cdots - 197253273y + 923521$
c_2, c_6	$y^{64} - 81y^{63} + \cdots - 20217y + 961$
c_3	$y^{64} + 33y^{63} + \cdots + 282593y + 8281$
c_4	$y^{64} - 2y^{63} + \cdots - 40y + 1$
c_5, c_8	$y^{64} - 35y^{63} + \cdots - 314288y + 4624$
c_7	$y^{64} - y^{63} + \cdots + 35y + 1$
c_9	$y^{64} + 92y^{63} + \cdots + 301309418769y + 6301343161$
c_{10}	$y^{64} + 19y^{63} + \cdots + 39598139y + 657721$
c_{11}	$y^{64} + 19y^{63} + \cdots + 133529y + 5329$
c_{12}	$y^{64} + 78y^{63} + \cdots + 15272118522y + 605799769$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.313536+0.928430I$ $a=\ 1.72819+0.46093I$ $b=-1.146680-0.590328I$	$-4.60431+6.37966I$	$4.21851-5.44879I$
$u=-0.313536-0.928430I$ $a=\ 1.72819-0.46093I$ $b=-1.146680+0.590328I$	$-4.60431-6.37966I$	$4.21851+5.44879I$
$u=\ 0.795119+0.560822I$ $a=-1.17974+1.14518I$ $b=-0.549493+0.075343I$	$-8.95792-7.99927I$	$-2.45661+6.71553I$
$u=\ 0.795119-0.560822I$ $a=-1.17974-1.14518I$ $b=-0.549493-0.075343I$	$-8.95792+7.99927I$	$-2.45661-6.71553I$
$u=\ 0.547034+0.887218I$ $a=-1.47486+0.31618I$ $b=\ 1.240990-0.613531I$	$-5.34471-2.73153I$	$1.11554+3.31035I$
$u=\ 0.547034-0.887218I$ $a=-1.47486-0.31618I$ $b=\ 1.240990+0.613531I$	$-5.34471+2.73153I$	$1.11554-3.31035I$
$u=\ 0.905830+0.202592I$ $a=\ 0.801451-0.189428I$ $b=\ 0.0992545-0.0572400I$	$-1.89160-0.13655I$	$-5.74382-0.58160I$
$u=\ 0.905830-0.202592I$ $a=\ 0.801451+0.189428I$ $b=\ 0.0992545+0.0572400I$	$-1.89160+0.13655I$	$-5.74382+0.58160I$
$u=-0.718433+0.579587I$ $a=-1.138640-0.604435I$ $b=\ 0.168043+0.042894I$	$-1.66794+4.14809I$	$-1.94761-7.92865I$
$u=-0.718433-0.579587I$ $a=-1.138640+0.604435I$ $b=\ 0.168043-0.042894I$	$-1.66794-4.14809I$	$-1.94761+7.92865I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.931771 + 0.606631I$ $a = 0.767324 + 0.472502I$ $b = -0.903443 - 0.525413I$	$3.11129 - 4.90246I$	$0. + 6.64058I$
$u = 0.931771 - 0.606631I$ $a = 0.767324 - 0.472502I$ $b = -0.903443 + 0.525413I$	$3.11129 + 4.90246I$	$0. - 6.64058I$
$u = 0.608117 + 0.645945I$ $a = 1.54613 + 0.89155I$ $b = -0.966015 + 0.576493I$	$3.28606 - 3.38738I$	$3.49350 + 7.72062I$
$u = 0.608117 - 0.645945I$ $a = 1.54613 - 0.89155I$ $b = -0.966015 - 0.576493I$	$3.28606 + 3.38738I$	$3.49350 - 7.72062I$
$u = 1.118670 + 0.262763I$ $a = -0.425297 + 0.859369I$ $b = -0.264219 - 0.462135I$	$-7.70013 - 1.88690I$	0
$u = 1.118670 - 0.262763I$ $a = -0.425297 - 0.859369I$ $b = -0.264219 + 0.462135I$	$-7.70013 + 1.88690I$	0
$u = 0.415838 + 0.711049I$ $a = -0.21037 - 1.74652I$ $b = 0.843215 - 0.109604I$	$0.231680 - 1.139720I$	$4.34801 + 7.52749I$
$u = 0.415838 - 0.711049I$ $a = -0.21037 + 1.74652I$ $b = 0.843215 + 0.109604I$	$0.231680 + 1.139720I$	$4.34801 - 7.52749I$
$u = -0.056636 + 0.733680I$ $a = -1.29377 + 1.19577I$ $b = 0.524020 + 0.229386I$	$5.23978 + 1.80222I$	$13.43627 - 2.54767I$
$u = -0.056636 - 0.733680I$ $a = -1.29377 - 1.19577I$ $b = 0.524020 - 0.229386I$	$5.23978 - 1.80222I$	$13.43627 + 2.54767I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.667566+0.309584I$ $a=-1.32046+0.68489I$ $b=\ 0.903912-0.216297I$	$-0.79116+2.64492I$	$-4.65254+4.03443I$
$u=-0.667566-0.309584I$ $a=-1.32046-0.68489I$ $b=\ 0.903912+0.216297I$	$-0.79116-2.64492I$	$-4.65254-4.03443I$
$u=\ 0.142284+0.713386I$ $a=\ 1.025040+0.094527I$ $b=-1.13010+1.00771I$	$1.51636-1.64164I$	$2.99307+5.98952I$
$u=\ 0.142284-0.713386I$ $a=\ 1.025040-0.094527I$ $b=-1.13010-1.00771I$	$1.51636+1.64164I$	$2.99307-5.98952I$
$u=-1.172400+0.565699I$ $a=\ 0.586710+0.572071I$ $b=\ 0.708917+0.272244I$	$-12.35140+1.42793I$	0
$u=-1.172400-0.565699I$ $a=\ 0.586710-0.572071I$ $b=\ 0.708917-0.272244I$	$-12.35140-1.42793I$	0
$u=-1.335590+0.249330I$ $a=\ 0.055887+0.659381I$ $b=\ 0.436791-0.571046I$	$-8.51911-1.79325I$	0
$u=-1.335590-0.249330I$ $a=\ 0.055887-0.659381I$ $b=\ 0.436791+0.571046I$	$-8.51911+1.79325I$	0
$u=\ 1.036250+0.894606I$ $a=-0.641417-0.592734I$ $b=\ 1.56427+0.08327I$	$3.05175-2.56289I$	0
$u=\ 1.036250-0.894606I$ $a=-0.641417+0.592734I$ $b=\ 1.56427-0.08327I$	$3.05175+2.56289I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.201469 + 0.595721I$ $a = 0.141582 + 0.261679I$ $b = 0.368885 + 0.672035I$	$0.180822 - 1.357760I$	$1.47757 + 4.14647I$
$u = 0.201469 - 0.595721I$ $a = 0.141582 - 0.261679I$ $b = 0.368885 - 0.672035I$	$0.180822 + 1.357760I$	$1.47757 - 4.14647I$
$u = -0.057818 + 1.371080I$ $a = -0.545883 + 0.246577I$ $b = 2.01305 - 1.25534I$	$-5.83121 + 3.82325I$	0
$u = -0.057818 - 1.371080I$ $a = -0.545883 - 0.246577I$ $b = 2.01305 + 1.25534I$	$-5.83121 - 3.82325I$	0
$u = 0.498905 + 0.371242I$ $a = -1.65967 - 0.53182I$ $b = 1.75112 - 1.24099I$	$-7.58122 - 7.03725I$	$-3.47625 + 8.84937I$
$u = 0.498905 - 0.371242I$ $a = -1.65967 + 0.53182I$ $b = 1.75112 + 1.24099I$	$-7.58122 + 7.03725I$	$-3.47625 - 8.84937I$
$u = -0.90400 + 1.09021I$ $a = 0.794373 - 0.155195I$ $b = -1.40953 - 0.23797I$	$5.85881 + 7.03857I$	0
$u = -0.90400 - 1.09021I$ $a = 0.794373 + 0.155195I$ $b = -1.40953 + 0.23797I$	$5.85881 - 7.03857I$	0
$u = -0.427356 + 0.281403I$ $a = 0.219577 - 0.759859I$ $b = -1.255080 - 0.297545I$	$2.64087 + 0.13449I$	$3.50237 + 3.05615I$
$u = -0.427356 - 0.281403I$ $a = 0.219577 + 0.759859I$ $b = -1.255080 + 0.297545I$	$2.64087 - 0.13449I$	$3.50237 - 3.05615I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.09532+1.03428I$ $a=-0.881703+0.452299I$ $b=\ \ 1.80167+0.70128I$	$3.35796+9.86267I$	0
$u=-1.09532-1.03428I$ $a=-0.881703-0.452299I$ $b=\ \ 1.80167-0.70128I$	$3.35796-9.86267I$	0
$u=-0.295497+0.344433I$ $a=\ \ 2.19362-0.77590I$ $b=-1.00229-1.72181I$	$-7.87777+0.76027I$	$-0.44254-2.24356I$
$u=-0.295497-0.344433I$ $a=\ \ 2.19362+0.77590I$ $b=-1.00229+1.72181I$	$-7.87777-0.76027I$	$-0.44254+2.24356I$
$u=\ \ 0.97455+1.25530I$ $a=\ \ 0.815863+0.115800I$ $b=-1.59645+0.91699I$	$1.89181-7.52039I$	0
$u=\ \ 0.97455-1.25530I$ $a=\ \ 0.815863-0.115800I$ $b=-1.59645-0.91699I$	$1.89181+7.52039I$	0
$u=-0.99150+1.25611I$ $a=\ \ 0.556030-0.517387I$ $b=-1.77104-0.38113I$	$3.78777-1.85763I$	0
$u=-0.99150-1.25611I$ $a=\ \ 0.556030+0.517387I$ $b=-1.77104+0.38113I$	$3.78777+1.85763I$	0
$u=-0.314719+0.204304I$ $a=-2.39055+1.35572I$ $b=\ \ 1.139280+0.269051I$	$-0.56044+2.14518I$	$-4.65679-4.01006I$
$u=-0.314719-0.204304I$ $a=-2.39055-1.35572I$ $b=\ \ 1.139280-0.269051I$	$-0.56044-2.14518I$	$-4.65679+4.01006I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.15220 + 1.15374I$ $a = -0.933219 - 0.281370I$ $b = 1.70870 - 1.18039I$	$-5.2447 - 15.7535I$	0
$u = 1.15220 - 1.15374I$ $a = -0.933219 + 0.281370I$ $b = 1.70870 + 1.18039I$	$-5.2447 + 15.7535I$	0
$u = 0.93576 + 1.41846I$ $a = -0.435534 - 0.232731I$ $b = 1.57902 - 0.12336I$	$1.47439 - 1.95616I$	0
$u = 0.93576 - 1.41846I$ $a = -0.435534 + 0.232731I$ $b = 1.57902 + 0.12336I$	$1.47439 + 1.95616I$	0
$u = 1.30479 + 1.13160I$ $a = 0.634730 + 0.483139I$ $b = -1.69635 + 1.46152I$	$2.53445 - 3.97108I$	0
$u = 1.30479 - 1.13160I$ $a = 0.634730 - 0.483139I$ $b = -1.69635 - 1.46152I$	$2.53445 + 3.97108I$	0
$u = -1.64567 + 0.75087I$ $a = -0.318200 + 0.497722I$ $b = 0.506486 + 1.315920I$	$4.34227 + 0.36034I$	0
$u = -1.64567 - 0.75087I$ $a = -0.318200 - 0.497722I$ $b = 0.506486 - 1.315920I$	$4.34227 - 0.36034I$	0
$u = -1.21980 + 1.35210I$ $a = 0.721956 - 0.216760I$ $b = -1.86466 - 1.57937I$	$-9.44086 + 7.17279I$	0
$u = -1.21980 - 1.35210I$ $a = 0.721956 + 0.216760I$ $b = -1.86466 + 1.57937I$	$-9.44086 - 7.17279I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.082568+0.145421I$ $a=-8.02990-1.39710I$ $b=-0.508076-0.441255I$	$3.14263-0.58927I$	$-2.43518-0.70079I$
$u=-0.082568-0.145421I$ $a=-8.02990+1.39710I$ $b=-0.508076+0.441255I$	$3.14263+0.58927I$	$-2.43518+0.70079I$
$u=1.22982+1.54138I$ $a=0.290748+0.445396I$ $b=-1.79422+0.03950I$	$-4.98726+6.57805I$	0
$u=1.22982-1.54138I$ $a=0.290748-0.445396I$ $b=-1.79422-0.03950I$	$-4.98726-6.57805I$	0

II.

$\boldsymbol{I_2^u = \langle 1.12\times 10^{13}u^{21} - 1.48\times 10^{13}u^{20} + \cdots + 6.96\times 10^{12}b + 6.98\times 10^{12},\ 6.82\times 10^{13}u^{21} - 9.83\times 10^{13}u^{20} + \cdots + 6.96\times 10^{12}a + 4.27\times 10^{13},\ u^{22} - 2u^{21} + \cdots - 2u + 1\rangle}$

(i) Arc colorings

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

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

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

$$a_{12} = \begin{pmatrix} -9.80169u^{21} + 14.1255u^{20} + \cdots - 29.4692u - 6.14269 \\ -1.60229u^{21} + 2.12439u^{20} + \cdots - 2.19395u - 1.00279 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.23984u^{21} - 19.7513u^{20} + \cdots + 45.8986u - 51.8152 \\ -0.923468u^{21} + 2.06927u^{20} + \cdots - 4.08774u + 2.55849 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.31637u^{21} - 17.6820u^{20} + \cdots + 41.8109u - 49.2567 \\ -0.923468u^{21} + 2.06927u^{20} + \cdots - 4.08774u + 2.55849 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -11.7551u^{21} + 19.2178u^{20} + \cdots - 36.0736u + 1.44016 \\ 1.38030u^{21} - 2.46786u^{20} + \cdots + 4.94250u - 0.529976 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -6.56215u^{21} + 26.1647u^{20} + \cdots - 57.6907u + 50.1938 \\ 1.59529u^{21} - 3.25044u^{20} + \cdots + 7.14956u - 3.05913 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -11.9938u^{21} + 15.5512u^{20} + \cdots - 30.5092u - 12.6233 \\ -1.86680u^{21} + 3.47738u^{20} + \cdots - 5.91910u + 1.95585 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 15.6209u^{21} - 49.7963u^{20} + \cdots + 106.240u - 77.5520 \\ -4.91539u^{21} + 9.58345u^{20} + \cdots - 19.0836u + 5.53084 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -10.1270u^{21} + 12.0738u^{20} + \cdots - 24.5900u - 14.5792 \\ -1.86680u^{21} + 3.47738u^{20} + \cdots - 5.91910u + 1.95585 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 13.9617u^{21} - 40.0092u^{20} + \cdots + 77.7503u - 57.2328 \\ -9.01335u^{21} + 17.7162u^{20} + \cdots - 35.1771u + 10.1227 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= \frac{77090866342321}{6959144640989}u^{21} + \frac{24417195627111}{6959144640989}u^{20} + \cdots - \frac{131924333737762}{6959144640989}u + \frac{529449466425046}{6959144640989}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{22} - 22u^{21} + \cdots - 18u + 1$
c_2	$u^{22} - 11u^{20} + \cdots - 4u + 1$
c_3	$u^{22} + 6u^{21} + \cdots + 22u + 7$
c_4	$u^{22} + 3u^{21} + \cdots - 3u + 1$
c_5	$u^{22} - 10u^{20} + \cdots - 4u + 4$
c_6	$u^{22} - 11u^{20} + \cdots + 4u + 1$
c_7	$u^{22} - 2u^{21} + \cdots - 2u + 1$
c_8	$u^{22} - 10u^{20} + \cdots + 4u + 4$
c_9	$u^{22} - u^{21} + \cdots + 6u + 1$
c_{10}	$u^{22} + 2u^{21} + \cdots + 4u + 11$
c_{11}	$u^{22} - 2u^{21} + \cdots - 2u + 1$
c_{12}	$u^{22} - 3u^{21} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{22} - 34y^{21} + \cdots - 86y + 1$
c_2, c_6	$y^{22} - 22y^{21} + \cdots - 18y + 1$
c_3	$y^{22} + 12y^{21} + \cdots + 552y + 49$
c_4	$y^{22} - 3y^{21} + \cdots - 21y + 1$
c_5, c_8	$y^{22} - 20y^{21} + \cdots - 360y + 16$
c_7	$y^{22} - 2y^{21} + \cdots + 10y + 1$
c_9	$y^{22} + 11y^{21} + \cdots - 8y + 1$
c_{10}	$y^{22} + 10y^{21} + \cdots - 1930y + 121$
c_{11}	$y^{22} + 10y^{21} + \cdots + 20y + 1$
c_{12}	$y^{22} + 9y^{21} + \cdots - 11y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.059740+0.923637I$ $a=-0.825379+0.806774I$ $b=\ \ 1.80958-0.44104I$	$-6.67000-6.08404I$	$0.07907+4.41733I$
$u=-0.059740-0.923637I$ $a=-0.825379-0.806774I$ $b=\ \ 1.80958+0.44104I$	$-6.67000+6.08404I$	$0.07907-4.41733I$
$u=\ \ 1.110170+0.156513I$ $a=-0.218712+0.595946I$ $b=-0.565963-0.935358I$	$-9.15907-0.38779I$	$-3.84597-0.39740I$
$u=\ \ 1.110170-0.156513I$ $a=-0.218712-0.595946I$ $b=-0.565963+0.935358I$	$-9.15907+0.38779I$	$-3.84597+0.39740I$
$u=-0.560586+0.578524I$ $a=-0.162842-1.197430I$ $b=-0.873727-0.227661I$	$-0.093894+0.509045I$	$-2.06274+2.06357I$
$u=-0.560586-0.578524I$ $a=-0.162842+1.197430I$ $b=-0.873727+0.227661I$	$-0.093894-0.509045I$	$-2.06274-2.06357I$
$u=\ \ 0.468082+0.590835I$ $a=\ \ 0.829025+0.241574I$ $b=-1.38855+0.85198I$	$2.61073-0.75532I$	$3.73998+7.77562I$
$u=\ \ 0.468082-0.590835I$ $a=\ \ 0.829025-0.241574I$ $b=-1.38855-0.85198I$	$2.61073+0.75532I$	$3.73998-7.77562I$
$u=-0.585432+0.445145I$ $a=-1.368150+0.243037I$ $b=\ \ 0.963772-0.376578I$	$-0.54127+3.01960I$	$5.04193-10.09843I$
$u=-0.585432-0.445145I$ $a=-1.368150-0.243037I$ $b=\ \ 0.963772+0.376578I$	$-0.54127-3.01960I$	$5.04193+10.09843I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.990692+0.939676I$ $a=\ \ 0.582887-0.490467I$ $b=-1.53592+0.35917I$	$4.32636+3.84430I$	$4.24435-3.41824I$
$u=-0.990692-0.939676I$ $a=\ \ 0.582887+0.490467I$ $b=-1.53592-0.35917I$	$4.32636-3.84430I$	$4.24435+3.41824I$
$u=\ \ 0.95193+1.04804I$ $a=\ \ 0.973386+0.245120I$ $b=-1.55211+0.58904I$	$5.52972-8.35084I$	$2.94788+7.36228I$
$u=\ \ 0.95193-1.04804I$ $a=\ \ 0.973386-0.245120I$ $b=-1.55211-0.58904I$	$5.52972+8.35084I$	$2.94788-7.36228I$
$u=\ \ 0.170032+0.547687I$ $a=-2.13940-0.26067I$ $b=\ \ 0.485058+0.571865I$	$4.46696+2.32267I$	$4.86381-5.13840I$
$u=\ \ 0.170032-0.547687I$ $a=-2.13940+0.26067I$ $b=\ \ 0.485058-0.571865I$	$4.46696-2.32267I$	$4.86381+5.13840I$
$u=\ \ 0.208685+0.523085I$ $a=-0.89334-3.30383I$ $b=\ \ 0.542839-0.032801I$	$3.64369-0.94557I$	$9.49564+8.08210I$
$u=\ \ 0.208685-0.523085I$ $a=-0.89334+3.30383I$ $b=\ \ 0.542839+0.032801I$	$3.64369+0.94557I$	$9.49564-8.08210I$
$u=\ \ 1.56936+0.75876I$ $a=-0.199730-0.640355I$ $b=\ \ 1.07456-0.97330I$	$4.45576+1.24455I$	$9.37100-3.48577I$
$u=\ \ 1.56936-0.75876I$ $a=-0.199730+0.640355I$ $b=\ \ 1.07456+0.97330I$	$4.45576-1.24455I$	$9.37100+3.48577I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.28180+1.51259I$		
$a=-0.577745+0.315382I$	$2.94554+4.02787I$	$13.1251-7.3446I$
$b=\ \ 2.04046+1.44608I$		
$u=-1.28180-1.51259I$		
$a=-0.577745-0.315382I$	$2.94554-4.02787I$	$13.1251+7.3446I$
$b=\ \ 2.04046-1.44608I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{22}-22u^{21}+\cdots-18u+1)(u^{64}+81u^{63}+\cdots+20217u+961)$
c_2	$(u^{22}-11u^{20}+\cdots-4u+1)(u^{64}-u^{63}+\cdots-335u+31)$
c_3	$(u^{22}+6u^{21}+\cdots+22u+7)(u^{64}-5u^{63}+\cdots-649u+91)$
c_4	$(u^{22}+3u^{21}+\cdots-3u+1)(u^{64}-u^{62}+\cdots+22u+1)$
c_5	$(u^{22}-10u^{20}+\cdots-4u+4)(u^{64}-u^{63}+\cdots+184u+68)$
c_6	$(u^{22}-11u^{20}+\cdots+4u+1)(u^{64}-u^{63}+\cdots-335u+31)$
c_7	$(u^{22}-2u^{21}+\cdots-2u+1)(u^{64}+3u^{63}+\cdots-9u+1)$
c_8	$(u^{22}-10u^{20}+\cdots+4u+4)(u^{64}-u^{63}+\cdots+184u+68)$
c_9	$(u^{22}-u^{21}+\cdots+6u+1)(u^{64}+46u^{62}+\cdots-120919u+79381)$
c_{10}	$(u^{22}+2u^{21}+\cdots+4u+11)(u^{64}-u^{63}+\cdots-4829u+811)$
c_{11}	$(u^{22}-2u^{21}+\cdots-2u+1)(u^{64}+5u^{63}+\cdots-399u+73)$
c_{12}	$(u^{22}-3u^{21}+\cdots+u+1)(u^{64}-4u^{63}+\cdots-163376u+24613)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{22} - 34y^{21} + \cdots - 86y + 1)$ $\cdot (y^{64} - 185y^{63} + \cdots - 197253273y + 923521)$
c_2, c_6	$(y^{22} - 22y^{21} + \cdots - 18y + 1)(y^{64} - 81y^{63} + \cdots - 20217y + 961)$
c_3	$(y^{22} + 12y^{21} + \cdots + 552y + 49)(y^{64} + 33y^{63} + \cdots + 282593y + 8281)$
c_4	$(y^{22} - 3y^{21} + \cdots - 21y + 1)(y^{64} - 2y^{63} + \cdots - 40y + 1)$
c_5, c_8	$(y^{22} - 20y^{21} + \cdots - 360y + 16)(y^{64} - 35y^{63} + \cdots - 314288y + 4624)$
c_7	$(y^{22} - 2y^{21} + \cdots + 10y + 1)(y^{64} - y^{63} + \cdots + 35y + 1)$
c_9	$(y^{22} + 11y^{21} + \cdots - 8y + 1)$ $\cdot (y^{64} + 92y^{63} + \cdots + 301309418769y + 6301343161)$
c_{10}	$(y^{22} + 10y^{21} + \cdots - 1930y + 121)$ $\cdot (y^{64} + 19y^{63} + \cdots + 39598139y + 657721)$
c_{11}	$(y^{22} + 10y^{21} + \cdots + 20y + 1)(y^{64} + 19y^{63} + \cdots + 133529y + 5329)$
c_{12}	$(y^{22} + 9y^{21} + \cdots - 11y + 1)$ $\cdot (y^{64} + 78y^{63} + \cdots + 15272118522y + 605799769)$