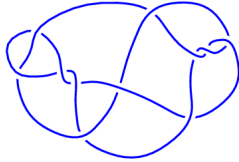
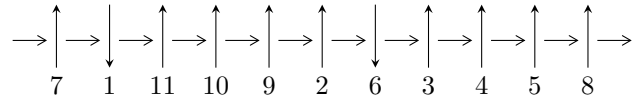


11a₂₀₈ (K11a₂₀₈)

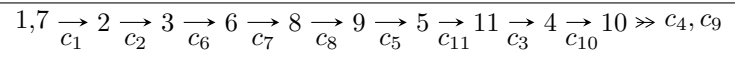


1

Arc Sequences



Solving Sequence



Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{52} + u^{51} + \dots + 2u - 1 \rangle$$

There are 1 irreducible components with 52 representations.

¹The knot diagram image is adapter from “C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, <http://www.indiana.edu/~knotinfo>”

$$\text{I. } I_1^u = \langle u^{52} + u^{51} + \dots + 2u - 1 \rangle$$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^9 + 2u^7 + 3u^5 + 2u^3 + u \\ -u^9 - u^7 - u^5 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{21} - 4u^{19} + \dots - 2u^3 - u \\ u^{21} + 3u^{19} + 7u^{17} + 10u^{15} + 10u^{13} + 7u^{11} + u^9 - 2u^7 - 3u^5 - u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^8 - u^6 - u^4 + 1 \\ u^{10} + 2u^8 + 3u^6 + 2u^4 + u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{20} + 3u^{18} + 7u^{16} + 10u^{14} + 10u^{12} + 7u^{10} + u^8 - 2u^6 - 3u^4 - u^2 + 1 \\ -u^{22} - 4u^{20} + \dots - 2u^4 - u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{51} + 8u^{49} + \dots + u^3 + 2u \\ -u^{51} - u^{50} + \dots - 2u + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{51} + 8u^{49} + \dots + u^3 + 2u \\ -u^{51} - u^{50} + \dots - 2u + 1 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.812741 - 0.682085I$	$4.28204 - 8.22013I$	$11.15083 + 4.69120I$
$u = -0.812741 + 0.682085I$	$4.28204 + 8.22013I$	$11.15083 - 4.69120I$
$u = -0.772975 - 0.816132I$	$6.58267 + 5.63550I$	$13.2814 - 5.3850I$
$u = -0.772975 + 0.816132I$	$6.58267 - 5.63550I$	$13.2814 + 5.3850I$
$u = -0.768826 - 0.671773I$	$2.57641 - 0.11774I$	$9.48504 - 0.88977I$
$u = -0.768826 + 0.671773I$	$2.57641 + 0.11774I$	$9.48504 + 0.88977I$
$u = -0.749484 - 0.734944I$	$3.28879 - 0.58865I$	$11.43703 + 2.08567I$
$u = -0.749484 + 0.734944I$	$3.28879 + 0.58865I$	$11.43703 - 2.08567I$
$u = -0.741062 - 0.918318I$	$6.26590 + 0.08152I$	$12.71506 - 0.27910I$
$u = -0.741062 + 0.918318I$	$6.26590 - 0.08152I$	$12.71506 + 0.27910I$
$u = -0.719515 - 1.016111I$	$3.2680 + 13.9792I$	$9.31717 - 9.43811I$
$u = -0.719515 + 1.016111I$	$3.2680 - 13.9792I$	$9.31717 + 9.43811I$
$u = -0.704555 - 0.970451I$	$2.57341 + 6.12702I$	$9.43955 - 7.72623I$
$u = -0.704555 + 0.970451I$	$2.57341 - 6.12702I$	$9.43955 + 7.72623I$
$u = -0.699306 - 1.006296I$	$1.57520 + 5.69142I$	$7.58293 - 3.99818I$
$u = -0.699306 + 1.006296I$	$1.57520 - 5.69142I$	$7.58293 + 3.99818I$
$u = -0.575732 - 0.249215I$	$-2.51014 + 2.07572I$	$5.84325 - 3.66425I$
$u = -0.575732 + 0.249215I$	$-2.51014 - 2.07572I$	$5.84325 + 3.66425I$
$u = -0.564176$	5.97021	16.1932
$u = -0.542555 - 0.954190I$	$-4.16270 + 1.90381I$	$1.38256 - 2.60810I$
$u = -0.542555 + 0.954190I$	$-4.16270 - 1.90381I$	$1.38256 + 2.60810I$
$u = -0.189335 - 0.934390I$	$3.08561 + 2.46256I$	$8.42989 - 4.48427I$
$u = -0.189335 + 0.934390I$	$3.08561 - 2.46256I$	$8.42989 + 4.48427I$
$u = -0.113059 - 1.052613I$	$-6.59928 + 4.05816I$	$-1.05392 - 4.39886I$
$u = -0.113059 + 1.052613I$	$-6.59928 - 4.05816I$	$-1.05392 + 4.39886I$
$u = 0.063300 - 0.938721I$	$-2.09979 - 1.29128I$	$2.50126 + 5.46837I$
$u = 0.063300 + 0.938721I$	$-2.09979 + 1.29128I$	$2.50126 - 5.46837I$
$u = 0.085244 - 1.047636I$	$-3.32915 + 0.06069I$	$1.99003 + 0.27621I$
$u = 0.085244 + 1.047636I$	$-3.32915 - 0.06069I$	$1.99003 - 0.27621I$
$u = 0.132755 - 1.056618I$	$-2.13743 - 8.17751I$	$3.80777 + 6.73213I$

	Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.132755 + 1.056618I$	$-2.13743 + 8.17751I$	$3.80777 - 6.73213I$
$u =$	0.362065	0.641117	15.5686
$u =$	$0.506635 - 0.944324I$	$-0.02731 + 2.14885I$	$5.90152 - 0.32388I$
$u =$	$0.506635 + 0.944324I$	$-0.02731 - 2.14885I$	$5.90152 + 0.32388I$
$u =$	$0.548113 - 0.343853I$	$0.91864 + 1.70258I$	$9.13001 - 0.33121I$
$u =$	$0.548113 + 0.343853I$	$0.91864 - 1.70258I$	$9.13001 + 0.33121I$
$u =$	$0.573285 - 0.968251I$	$-0.49912 - 5.98276I$	$5.45137 + 6.27101I$
$u =$	$0.573285 + 0.968251I$	$-0.49912 + 5.98276I$	$5.45137 - 6.27101I$
$u =$	$0.612012 - 0.204828I$	$1.88978 - 5.96132I$	$11.11302 + 5.64995I$
$u =$	$0.612012 + 0.204828I$	$1.88978 + 5.96132I$	$11.11302 - 5.64995I$
$u =$	$0.697455 - 0.924225I$	$1.49374 - 3.03580I$	$6.84419 + 1.01357I$
$u =$	$0.697455 + 0.924225I$	$1.49374 + 3.03580I$	$6.84419 - 1.01357I$
$u =$	$0.711550 - 1.013251I$	$-1.39365 - 9.84829I$	$4.67114 + 7.72266I$
$u =$	$0.711550 + 1.013251I$	$-1.39365 + 9.84829I$	$4.67114 - 7.72266I$
$u =$	$0.731364 - 0.804742I$	$1.86476 - 2.42134I$	$7.78972 + 4.58127I$
$u =$	$0.731364 + 0.804742I$	$1.86476 + 2.42134I$	$7.78972 - 4.58127I$
$u =$	$0.733151 - 0.979368I$	$8.63821 - 7.17962I$	$13.9464 + 6.0522I$
$u =$	$0.733151 + 0.979368I$	$8.63821 + 7.17962I$	$13.9464 - 6.0522I$
$u =$	$0.797362 - 0.743175I$	$9.36019 + 1.41507I$	$15.5003 - 0.7140I$
$u =$	$0.797362 + 0.743175I$	$9.36019 - 1.41507I$	$15.5003 + 0.7140I$
$u =$	$0.797976 - 0.676802I$	$-0.37697 + 4.15655I$	$6.46155 - 2.97848I$
$u =$	$0.797976 + 0.676802I$	$-0.37697 - 4.15655I$	$6.46155 + 2.97848I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_6	$(u^{52} + u^{51} + \dots + 2u - 1)$
c_2, c_7	$(u^{52} + 17u^{51} + \dots - 6u + 1)$
c_3, c_5	$(u^{52} + 3u^{51} + \dots + 37u + 16)$
c_4, c_{10}	$(u^{52} + u^{51} + \dots + 3u^2 - 1)$
c_8	$(u^{52} + u^{51} + \dots - 28u - 40)$
c_9	$(u^{52} + u^{51} + \dots + 3u^2 - 1)$
c_{11}	$(u^{52} + 5u^{51} + \dots - 96u - 16)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y^{52} + 17y^{51} + \dots - 6y + 1)$
c_2, c_7	$(y^{52} + 37y^{51} + \dots - 54y + 1)$
c_3, c_5	$(y^{52} + 33y^{51} + \dots - 2425y + 256)$
c_4	$(y^{52} - 43y^{51} + \dots - 6y + 1)$
c_8	$(y^{52} - 7y^{51} + \dots - 38704y + 1600)$
c_9	$(y^{52} - 43y^{51} + \dots - 6y + 1)$
c_{10}	$(y^{52} - 43y^{51} + \dots - 6y + 1)$
c_{11}	$(y^{52} + 5y^{51} + \dots + 5856y + 256)$