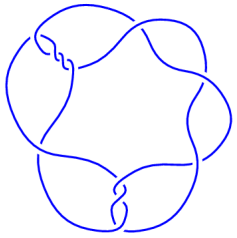
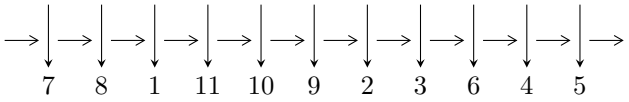
$11a_{339}$ $(K11a_{339})$



[1]

Arc Sequences



Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{27} + u^{26} + \cdots - 2u - 1 \rangle$$

There are 1 irreducible components with 27 representations.

[1] The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I. $I_1^u = \langle u^{27} + u^{26} + \cdots - 2u - 1 \rangle$

(i) Arc colorings

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

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

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

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

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

$$a_1 = \begin{pmatrix} u^3 - 2u \\ -u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^6 - 3u^4 + 2u^2 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -u^8 + 3u^6 - 3u^4 + 1 \\ -u^{10} + 4u^8 - 5u^6 + 3u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^{19} - 8u^{17} + 26u^{15} - 40u^{13} + 19u^{11} + 24u^9 - 30u^7 + 2u^5 + 5u^3 + 2u \\ -u^{19} + 7u^{17} - 20u^{15} + 27u^{13} - 11u^{11} - 13u^9 + 16u^7 - 6u^5 + u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{21} - 8u^{19} + \cdots - 4u^3 - 3u \\ u^{23} - 9u^{21} + \cdots - 4u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{21} - 8u^{19} + \cdots - 4u^3 - 3u \\ u^{23} - 9u^{21} + \cdots - 4u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.33611$	-12.4088	-20.5521
$u=-1.319891-0.213766I$	$-9.80481-5.99282I$	$-17.3414+5.5228I$
$u=-1.319891+0.213766I$	$-9.80481+5.99282I$	$-17.3414-5.5228I$
$u=-1.310476-0.415835I$	$-1.39565-10.11714I$	$-13.4570+5.7483I$
$u=-1.310476+0.415835I$	$-1.39565+10.11714I$	$-13.4570-5.7483I$
$u=-1.269784-0.428859I$	$5.53802-2.48385I$	$-9.46346+0.15279I$
$u=-1.269784+0.428859I$	$5.53802+2.48385I$	$-9.46346-0.15279I$
$u=-1.162545-0.167516I$	$-1.60577-1.16599I$	$-9.70330+0.15957I$
$u=-1.162545+0.167516I$	$-1.60577+1.16599I$	$-9.70330-0.15957I$
$u=-0.275134$	-0.522013	-19.2550
$u=-0.090324-0.551346I$	$1.43201-1.45915I$	$-6.27932+5.94435I$
$u=-0.090324+0.551346I$	$1.43201+1.45915I$	$-6.27932-5.94435I$
$u=-0.013123-0.894482I$	$9.43523-2.24680I$	$-6.17904+3.02780I$
$u=-0.013123+0.894482I$	$9.43523+2.24680I$	$-6.17904-3.02780I$
$u=0.041452-0.892930I$	$2.82267+5.43200I$	$-9.64025-3.04274I$
$u=0.041452+0.892930I$	$2.82267-5.43200I$	$-9.64025+3.04274I$
$u=0.232231-0.591655I$	$-4.98362+3.14884I$	$-11.41725-4.81307I$
$u=0.232231+0.591655I$	$-4.98362-3.14884I$	$-11.41725+4.81307I$
$u=0.781754-0.091734I$	$-6.68333-0.00498I$	$-14.6673-0.4486I$
$u=0.781754+0.091734I$	$-6.68333+0.00498I$	$-14.6673+0.4486I$
$u=1.243221-0.434957I$	$-0.891189-0.687706I$	$-12.83371-0.18639I$
$u=1.243221+0.434957I$	$-0.891189+0.687706I$	$-12.83371+0.18639I$
$u=1.25317$	-4.90599	-19.9999
$u=1.255666-0.210110I$	$-2.66095+4.20438I$	$-14.1782-7.6940I$
$u=1.255666+0.210110I$	$-2.66095-4.20438I$	$-14.1782+7.6940I$
$u=1.290856-0.422984I$	$5.37877+6.95944I$	$-9.93623-6.05202I$
$u=1.290856+0.422984I$	$5.37877-6.95944I$	$-9.93623+6.05202I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_2, c_7 c_8	$(u^{27}+u^{26}+\cdots-2u-1)$
c_3, c_5, c_6 c_9	$(u^{27}+3u^{26}+\cdots+4u+1)$
c_4, c_{10}, c_{11}	$(u^{27}+u^{26}+\cdots-2u-1)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_2, c_7 c_8	$(y^{27} - 29y^{26} + \cdots + 10y - 1)$
c_3, c_5, c_6 c_9	$(y^{27} + 31y^{26} + \cdots + 22y - 1)$
c_4, c_{10}, c_{11}	$(y^{27} - 21y^{26} + \cdots + 10y - 1)$