$11a_{367}$ ($K11a_{367}$)

A knot diagram[1]

Linearized knot diagam

$$\to | \to | \to | \to | \to | \to | \to | \to | \to | \to | \to | \to$$

7 8 9 10 11 1 2 3 4 5 6

Solving Sequence

$$1,7 \xrightarrow{c_1} 2 \xrightarrow{c_7} 8 \xrightarrow{c_2} 3 \xrightarrow{c_8} 9 \xrightarrow{c_6} 6 \xrightarrow{c_{11}} 11 \xrightarrow{c_5} 5 \xrightarrow{c_{10}} 10 \xrightarrow{c_4} 4 \twoheadrightarrow c_3, c_9$$
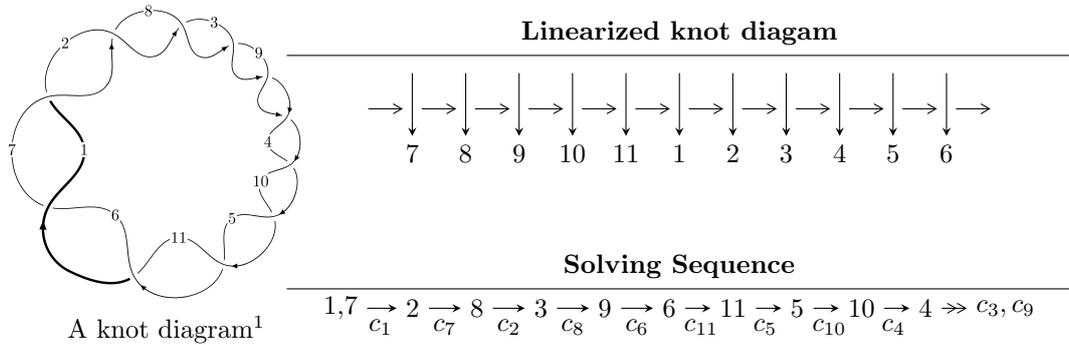
Ideals for irreducible components[2]of $X_{\mathbf{par}}$

$$I_1^u = \langle u^5 - u^4 - 4u^3 + 3u^2 + 3u - 1 \rangle$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 5 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.

$$\text{I. } I_1^u = \langle u^5 - u^4 - 4u^3 + 3u^2 + 3u - 1 \rangle$$

(i) Arc colorings

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

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

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

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

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

$$a_9 = \begin{pmatrix} u^3 - 2u \\ u^4 + u^3 - 3u^2 - 2u + 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^3 + 2u \\ -u^3 + u \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} u^4 - 3u^2 + 1 \\ u^4 + u^3 - 3u^2 - 2u + 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^4 - 3u^2 + 1 \\ u^4 + u^3 - 3u^2 - 2u + 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -22$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_5, c_6 c_7, c_8, c_9 c_{10}, c_{11}	$y^5 - 9y^4 + 28y^3 - 35y^2 + 15y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.830830$	-4.03757	-22.0000
$u = \quad 1.30972$	-11.2155	-22.0000
$u = -1.68251$	17.4961	-22.0000
$u = \quad 0.284630$	-0.448618	-22.0000
$u = \quad 1.91899$	3.14033	-22.0000

II. u-Polynomials

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

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_5, c_6 c_7, c_8, c_9 c_{10}, c_{11}	$y^5 - 9y^4 + 28y^3 - 35y^2 + 15y - 1$