

1145-57-2119

Caitlin Levenson* (leverson@math.gatech.edu) and **Dan Rutherford**. *DGA Representations, Ruling Polynomials, and the Colored HOMFLY-PT Polynomial*.

Given a pattern braid $\beta \in J^1(S^1)$, to any Legendrian knot Λ in \mathbb{R}^3 with the standard contact structure, we can associate the Legendrian satellite knot $S(\Lambda, \beta)$. We will discuss the relationship between counts of augmentations of the Chekanov-Eliashberg differential graded algebra of $S(\Lambda, \beta)$ and counts of certain representations of the algebra of Λ . We will then define an m -graded n -colored ruling polynomial from the m -graded ruling polynomial, analogously to how the n -colored HOMFLY-PT polynomial is defined from the HOMFLY-PT polynomial, and extend results of the second author, to show that the 2-graded n -colored ruling polynomial appears as a specialization of the n -colored HOMFLY-PT polynomial. (Received September 24, 2018)