Caitlin Leverson*, leverson@math.gatech.edu, and Dan Rutherford. Satellite ruling polynomials and representations of the Chekanov-Eliashberg algebra. Preliminary report.

Given a pattern braid β in $J^1(S^1)$, to any Legendrian knot K in \mathbb{R}^3 with the standard contact structure, we can associate the Legendrian satellite knot $S(K,\beta)$. We will discuss the relationship between augmentations of the Chekanov-Eliashberg differential graded algebra of $S(K,\beta)$ and certain representations of the Chekanov-Eliashberg differential graded algebra of K. For certain patterns, we can then relate a specialization of the ruling polynomial of $S(K,\beta)$ to these representation numbers. (Received September 25, 2017)