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**Allison N Miller\*** ([allison.miller@rice.edu](mailto:allison.miller@rice.edu)). *The satellite operation and knot concordance.*

The classical satellite construction associates to a pattern knot  $P$  in a solid torus and a companion knot  $K$  in  $S^3$  a satellite knot  $P(K)$ , the image of  $P$  when the solid torus is ‘tied into’ the knot  $K$ . This operation descends to a well-defined map on the set of (smooth or topological) concordance classes of knots. Many natural questions about these maps remain open: when are they surjective, injective, or bijective? How do they behave with respect to measures of 4-dimensional complexity? How do they interact with additional group or metric space structure on the concordance set? I will discuss work giving partial progress towards answering these questions, including joint work with Piccirillo and with Feller–Pinzón-Caicedo. (Received August 31, 2020)