John Baldwin* (john.baldwin@bc.edu), Boston, MA 02131, and Steven Sivek. Instantons and L-space surgeries. Preliminary report.

Framed instanton homology is a gauge theoretic invariant which bears a strong resemblance to the hat version of Heegaard Floer homology. In this talk we will explain how the map on framed instanton homology induced by a cobordism $X$ decomposes into summands, analogous to the spin$^c$ decomposition of Heegaard Floer cobordism maps. We will use this decomposition to prove that “instanton L-space knots” are fibered, and then discuss applications to questions about the fundamental groups of Dehn surgeries on knots and to the A-polynomial. This is joint work with Steven Sivek. (Received July 16, 2019)