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*Taut foliations, Dehn surgery, and braid positivity*

The L-space conjecture predicts a surprising relationship between the algebraic, geometric, and Floer-homological properties of a 3-manifold  $Y$ . In particular, it predicts exactly which 3-manifolds admit a "taut foliation". In this talk, I'll discuss some of my past and forthcoming work investigating these connections, with a view towards "braid positive knots" (i.e. the knots realized as the closure of positive braids). I'll focus on applications: in particular, I'll present some new obstructions to braid positivity, and a new unknot detector. No background in foliations or Floer homology theories will be assumed. All are welcome!