Braid foliations and the generalized Jones conjecture

Professor Doug LaFountain
Western Illinois University

Abstract: One-dimensional loops (so-called knots or links) and two-dimensional surfaces which they enclose are fundamental objects in low-dimensional geometry and topology. In this talk we will consider links that wind continuously around a one-dimensional axis, and which are said to be braided about that braid axis. We will show that when two braids co-bound embedded annuli, we can use how these annuli intersect the braid axis, plus some additional discrete data on the annuli, to solve a long-standing problem in braid theory first conjectured by the Fields Medalist Vaughan Jones. No prior knowledge of any of these ideas/terms will be assumed.