

Persistently foliar knots

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I will describe an approach, applicable in a variety of settings, to constructing families of foliations in knot complements that strongly realize all nontrivial boundary slopes. For rational slopes, these foliations can be capped off by disks to obtain a taut, co-oriented foliation in every manifold obtained by Dehn surgery on that knot. As applications of this approach, we find that among the alternating and Montesinos knots, all those without reducible or L-space surgeries are persistently foliar. In addition, we find that any connected sum of alternating knots, Montesinos knots, or fibered knots is persistently foliar. Furthermore, any composite knot with a persistently foliar summand is easily shown to be persistently foliar. This is joint work with Charles Delman.

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