

# The problem of maximum Thurston-Bennequin number for knots

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Abstract. Legendrian submanifolds of contact 3-manifolds are one-dimensional, just like knots. This “coincidence” gives rise to an interesting and expanding intersection of contact and symplectic geometry on the one hand and classical knot theory on the other. As an illustration, we will survey recent results on maximizing the Thurston–Bennequin number (which is a measure of the twisting of the contact structure along a Legendrian) within a smooth knot type. In particular, we will indicate how Kauffman’s state circles can be used to solve the maximization problem for so-called +adequate (among them, alternating and positive) knots and links.