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A refinement of the Ozsvath-Szabo contact invariant

I will describe a refinement of the Ozsvath-Szabo contact invariant in Heegaard Floer theory, defined in joint work with Shea Vela-Vick. Our invariant assigns to a contact structure ξ a number $t(\xi) \in \mathbb{Z}_{\geq 1} \cup \{\infty\}$, and extends Ozsvath-Szabo's invariant in the sense that $t(\xi) = \infty$ iff $c(\xi) \neq 0$. In addition, we prove that if ξ is overtwisted, then $t(\xi) = 1$. Interestingly, t appears to be a stronger invariant than c in that there exist ξ with $c(\xi) = 0$ but $t(\xi) > 1$. In this talk, I will focus on the construction of t and its basic properties—in particular, its relationship to fractional Dehn twist coefficients.