

Obstructing Stein fillings by filtering the Heegaard Floer contact invariant

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The ‘contact invariant’ in Heegaard Floer homology has been one of the most widely-used tools in the field of contact topology since its introduction 2 decades ago by Ozsvath and Szabo. In the talk, we will discuss an interpretation of this invariant in the framework of open book decompositions of 3-manifolds, and a new refinement of the invariant which measures in some sense non-(Stein/symplectic)-fillability of a contact structure. We will show how this can be used to provide an obstruction to existence of Stein fillings of such structures. This is joint work with C. Kutluhan, G. Matic, and J. Van Horn-Morris.