

# Contact structures, Heegaard Floer homology and triangulated categories

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The goal of this talk is to associate a category  $\mathcal{C}(\Sigma)$  to a surface  $\Sigma$ , called the *contact category* and constructed from contact structures on  $\Sigma \times [0, 1]$ . The category  $\mathcal{C}(\Sigma)$  satisfies many of the axioms of a triangulated category, and, in particular, has distinguished triangles which we call the *bypass exact triangles*. We then describe an “exact” functor from  $\mathcal{C}(\Sigma)$  to the category of vector spaces, via Heegaard/sutured Floer homology.

2:15 p.m.  
Math 520  
Columbia University