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**Rumen Zarev\*** (rzarev@math.berkeley.edu). *Dividing sets, contact structures, and TQFTs*. Preliminary report.

One can enrich the category of 3-dimensional cobordisms between surfaces in different ways. One example is to look at surfaces with dividing sets (multi-curves dividing a surface into “positive” and “negative” parts), and 3-manifolds with contact structures.

One TQFT-like invariant for this category is the contact invariant EH valued in sutured Floer homology. It turns out that one can strengthen this to an  $A_\infty$ -invariant, using bordered sutured Floer homology. We can use this strengthening to show that the category of contact structured is closely related to the bordered category associated to a surface. (Received August 02, 2011)