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*Free boundary minimal surfaces of unbounded genus*

Free boundary minimal surfaces are natural variational objects that have been studied since the 40s. In spite of this, very few explicit examples in the simplest case of the round three ball are known. I will describe how variational methods can be used to construct new examples with unbounded genus resembling a desingularization of the critical catenoid and flat disk. I'll also give a new variational interpretation of the previously known examples.