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Periodic critical points of the Ohta-Kawasaki functional

In this talk we present some new observations about periodic critical points and local minimizers of a nonlocal isoperimetric problem arising in the modeling of diblock copolymers. In particular, by using a purely variational procedure, we show that it is possible to construct (locally minimizing) periodic critical points whose shape resemble that of any given strictly stable constant mean curvature (periodic) hypersurface.