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Equilibrium Shapes of Compound Vesicles CANGJIE XU, MICHAEL MIKSIS, STEPHEN DAVIS, Northwestern University — Many biological structures have a fine internal structure in which a membrane is geometrically confined by another membrane. Here we investigate how the equilibrium shape of a double membrane system changes as the length of the internal membrane is increased. A repulsive pressure is introduced between the membranes to prevent the membranes from intersecting. Large repulsive pressures yield complex response diagrams with bifurcation points where modal identities may changes. Regions in parameter space where such behavior occurs are then mapped.

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